# The Mining Journal,

## RAILWAY AND COMMERCIAL GAZETTE:

**FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.**

[*The* MINING JOURNAL *is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.*]

No. 2616.—VOL. LV. LONDON, SATURDAY, OCTOBER 10, 1885. PRICE ..... SIXPENCE. BY POST, £1 4s. PER ANNUM.



MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every week a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices.

MINES INSPECTED.

BANKERS: CITY BANK, London—SOUTH CORNWALL BANK, St. Austell.
Telegraph Address—"CROFTS, London." Telephone Number 1003.

SPECIAL DEALINGS in the following (or part):—

50 Albion Gold.
50 Akankoo, f. paid, 2s 9
50 Almada (New), 3s.
25 Bedford United, 7s
250 Balkis, 3d.
20 Birdseye, 23s. 6d.
25 Bratsberg, 8s. 6d.
50 Carn Camborne, 3s.
100 Callao Bis, 5s.
100 Cartago, f. pd., 3s. 9d.
50 Colom. Hyd., 9s. 9d.
10 Cape Copper, £21
50 California, 3s.
25 Colorado, £2 10s.
50 Chontales, 2s. 6d.
20 Copiapo, £3.
25 De Beer's, 4¼.
40 Denver, 6d.
100 Devala Moyar, 3s.
20 Devon Con., £2 2s 6d
100 Devon Friend, 6d.
15 Dolcoath, £73 10s.
50 Drakewalls, 3s. 3d.
25 East Blue Hills, 20s.
100 Eberhardt, 9d.
20 East Lovell.
30 Ecton.
15 El Callao, £52.
100 Frontino, 13s.
50 Frongoch, 6s. 9d.
50 Gogman, 1s. 3d.
100 Gold Coast, 1s.
75 Gold Hill, 1s. 6d.
50 Glenrock, 4s.
20 Great Holway,
15 Great Laxey, £9 15s.
20 Gunnis. (Clit.), 5s.
100 Hoover Hill, 7s. 9d.
50 Home Mines Trt. 14/
100 Indian Consol., 4s. 3d
120 Javali, 2s.
25 Killifreth, 12s.
25 Kim. North Block.
50 Kohinoor B, 2s. 3d.
70 La Plata, 5s.
30 La Trinidad.
25 Leadhills, £2 10s.
150 Lisbon-Berlyn, 9d.
25 Marke Valley, 3s.
20 Mason-Barry, £7 5s.
20 Montana, £2 10s.
50 Mysore Gold, £2.
70 New Chile, 18s. paid, 6s. 9d.
100 Nacupai, 1s. 3d.
50 New Caradon, 1s.
50 New Emma, 4s. 6d.
25 New Kitty, 10s.
50 Nouveau Monde, 2s
40 New W. Caradon, 1s.
100 Nundydroog, 9s. 6d
80 Nine Reefs, 3s.
50 Ooregum, 3s.
50 Organos, 8s.
50 Orita, 21s. 6d.
75 Oscar, 5s.
50 Oscar Vendors', fully paid, 3s. 3d.
10 Par Tin, 7s. 6d.
20 Polberro, £2 1s. 3d.
80 Potosi (New), 4s. 6d.
120 Port Phillip, 1s. 6d.
20 Phœnix United, 35s.
50 Panulcillo, 37s. 6d.
50 Prince of Wales, 8s
75 Pestarena, 1s. 3d.
10 Rio Tinto, £8 10s.
50 Ruby (New), 5s. 6d.
20 Richmond, £3 5s.
20 Roman Grav., £4 5s 9
20 Schwab's Gully, £3 7 6
150 Shepherd United, 2s 6
100 Spitzkop, 6s. 9d.
10 South Condurrow, £7
100 South Darren, 9s.
50 Tacquah, 1s. 9d.
50 Tambracherry, 3s 9d.
30 Tolima A., £3
20 ditto B, £2 2s. 6d.
70 Transvaal Gold, 1s 6d
20 Trevaunance, £2 5s.
50 Utd. Mexican, £2 2s 9
50 Van
50 Victoria Gold, 3s. 6d.
50 Violeta, 25s.
50 Wassau Gold (offer wanted).
10 West Basset, £2 5s.
Wheal Grenville. £13.
10 Wheal Agar, £19 5s.
20 Wheal Basset, £6 10s
60 West Caradon, 1s.
50 West Polbreen, 11s.
10 West Kitty.
50 Wheal Coates, 2s.
50 Wheal Crebor, 17s.
20 Wheal Kitty, 17s. 6d.
100 Wynaad Persev., 1s.

*** BUSINESS at CLOSE PRICES in all marketable TIN, COPPER, LEAD, GOLD, SILVER, and DIAMOND SHARES.

*** SHARES SOLD for the USUAL FORTNIGHTLY SETTLEMENT.

*** SHARES SOLD AT SPECIAL PRICES FOR FORWARD DELIVERY (ONE, TWO, or THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

HOME RAILWAYS.—FORTNIGHTLY ACCOUNTS OPENED ON RECEIPT OF THE USUAL COVER.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

FOREIGN BONDS.—FORTNIGHTLY ACCOUNTS OPENED on RECEIPT of the USUAL COVER.

| | |
|---|---|
| ARGENTINE | PERU, |
| EGYPTIAN UNIFIED. | RUSSIAN. |
| ITALIAN. | SPANISH. |
| MEXICAN. | TURKISH. |
| PORTUGUESE. | URUGUAY. |

*** SPECIAL BUSINESS in the above Stocks.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN, CANADIAN, AND FOREIGN RAILS—SPECIAL BUSINESS. Fortnightly accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

BANK, OMNIBUS, TRAMWAY, GAS, WATER, and CANAL SHARES.
BUSINESS in all the above, and fortnightly accounts opened.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS SHARES of all DESCRIPTIONS BOUGHT or SOLD. SPECIAL BUSINESS in:—

| | |
|---|---|
| AQUARIUM. | IRON and COAL. |
| HOTEL. | ELECTRIC LIGHT. |

And other COMMERCIAL or INDUSTRIAL SHARES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS in all STOCKS and SHARES dealt in.—
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

DIAMOND SHARES OF SOUTH AFRICA.—

| | |
|---|---|
| ARGENTINE DIAMOND. | FRENCH DIAMOND. |
| ANGLO AFRICAN. | KIMBERLEY CENTRAL. |
| DE BEER'S. | KIMBERLEY NORTH BLOCK. |
| FRENCH AND D'ESTERRE DIAMOND. | PHŒNIX DIAMOND. |
| | SCHWAB'S GULLY. |

BUSINESS in the ABOVE at CLOSE MARKET PRICES for USUAL FORTNIGHTLY SETTLEMENT.
SHARES SOLD for FORWARD DELIVERY (ONE, TWO, or THREE MONTHS) on DEPOSIT of TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

SCHWAB'S GULLY DIAMOND SHARES.—
DE BEER'S DIAMOND SHARES.
SPECIAL BUSINESS in the above, either for CURRENT SETTLEMENT or for FORWARD DELIVERY (one, two, or three months), on DEPOSIT of TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

LEAD SHARES—SPECIAL BUSINESS.

| | | |
|---|---|---|
| Great Holway. | Holywell District. | South Darren. |
| Great Laxey. | Leadhills. | Van. |
| Green Hurth. | Roman Gravels. | Weardale. |

Shares in the above for sale either for CURRENT SETTLEMENT or for FORWARD DELIVERY (one, two, or three months), on DEPOSIT OF TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

GOLD AND SILVER MINES.—INDIAN, NORTH AMERICAN, SOUTH AMERICAN, WEST AFRICAN, SOUTH AFRICAN, and MEXICAN Mining Shares.
BUSINESS as BUYER or SELLER in all the above.
Shares Sold for Fortnightly Account.
Shares Sold for Forward Delivery (one, two, or three months) on deposit of twenty per cent.
JAMES H. CROFTS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
No. 1, FINCH LANE, LONDON, E.C.
ESTABLISHED 1842.
LONDON BANKERS.—THE CITY BANK.
Telegraph Address—"CROFTS, London."

TO SHAREHOLDERS AND INVESTORS IN MINES.

BRITISH, FOREIGN, AND COLONIAL MINES.

IMPORTANT INFORMATION TO SHAREHOLDERS AS TO PURCHASE or SALE of MINES SHARES at PRESENT PRICES.

MESSRS. PETER WATSON AND CO.,
STOCK AND SHARE DEALERS,
18, AUSTIN FRIARS,
OLD BROAD STREET, LONDON, E.C.
(Near to the Stock Exchange.)

OVER FORTY YEARS' EXPERIENCE in connexion with BRITISH and FOREIGN MINE MANAGEMENT, and the STOCK and SHARE MARKETS.

BUSINESS in all MARKETABLE MINE SHARES and STOCK EXCHANGE SECURITIES.

SELECTED LIST OF MINE SHARES for INVESTMENT OR SPECULATION of TWELVE MINES sent ON APPLICATION, with a DAILY PRICE LIST of any Shares required by Customers and intending Purchasers.

BANKERS: The ALLIANCE BANK (Limited).

Every information may be obtained on personal Application or by Letter as to Purchases and Sales of Mine and other Shares.

MR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
3, GEORGE YARD, LOMBARD STREET, E.C.
ESTABLISHED 1853.
(NEARLY 19 YEARS IN OLD BROAD STREET.)
TELEPHONE No. 10,338.

STOCK EXCHANGE SYNDICATES. — Fully paid Shares, £5 each. Any number from 1 to 100 may be applied for. Each SYNDICATE will be closed, if possible, before the FORTNIGHTLY SETTLEMENT.
REMITTANCES should be made by next WEDNESDAY MORNING.

MR. ALFRED E. COOKE can SELL the following SHARES or any smaller marketable number FREE OF COMMISSION:—

100 Balkis, 4s. 6d.
20 Bratsberg, 7s. 6d.
50 Carn Camborne, 3s.
75 Callao Bis, 5s.
100 Cartago, f.pd., 3s. 6d.
60 Colom. Hyd., 9s. 9d.
5 Cape Copper, £21.
100 California, 2s. 9d.
20 Colorado.
100 Denver, 6d.
40 Devala Moyar, 2s. 6d.
10 Devon Con., £1 17s. 6
100 Devon Friendship, 6d
2 Dolcoath, £73½.
20 East Blue Hills, 28s 9
50 Eberhardt, 9d.
15 Ecton, 25s.
1 El Callao, £51½.
30 Frontino, 12s. 9d.
20 Frongoch, 3s. 9d.
5 Great Holway.
5 Great Laxey.
100 Hoover Hill, 7s.
20 Home Mines Trust, 14s. 6d.
80 Indian Consoli., 4s.
100 La Plata, 4s. 9d.
10 La Trinidad·
20 Leadhills, £2¼.
40 Mason & Barry, £7¼.
10 Montana, £2 6s. 3d.
50 Mysore Gold, £2 1s 3
100 New Chile, 7s.
20 New Emma, 5s.
60 New Lisbon.
400 Nouveau Monde, 2s 1
50 New W. Caradon, 1s.
50 Nundydroog, 9s. 9d.
80 Nine Reefs, 3s.
200 Ooregum, 2s. 9d.
50 Organos, 8s. 9d.
20 Orita, 22s. 6d.
30 Oscar,, 4s. 6d.
100 Oscar, vendors, 3s.
100 Potosi, 4s. 6d.
50 Prince of Wales, 8s. 9
10 Rio Tinto.
40 Ruby (New), 5s. 6d.
10 Richmond, £3¼.
10 Roman Gravels, £4.
20 Schwab's Gul., £3 7 6
20 South Darren, 9s.
5 Tolima A.
10 Trevaunance.
10 Uni. Mexican, £2⅜.
25 Van, 30s.
100 Victoria Gold, 2s. 6d.
15 Violetta.
5 Wheal Agar, £19.
10 Wheal Basset, £6⅜.
5 West Kitty.
20 Wheal Crebor, 15s.

NOVEMBER.—SPECIAL BUSINESS for middle or end of month account on deposit of TEN PER CENT.

BUSINESS TRANSACTED at CLOSEST CURRENT PRICES, FREE of COMMISSION, in all STOCK EXCHANGE SECURITIES either for SPECULATION or INVESTMENT.

ALFRED E. COOKE, 3, GEORGE YARD, LOMBARD STREET, LONDON.
ESTABLISHED 1853.
BANKERS: ROYAL EXCHANGE (Limited), London.

MR. JAMES STOCKER, STOCKBROKER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
Has Special Business in the following for cash or settlement by arrangement free of commission:—

75 Albion, New.
70 Almada, New, 2s. 9d.
400 Akankoo, 2s. 9d.
10 Balkis, 6d.
40 Bratsberg, 6s. 6d.
60 Cartago, 3s. 9d.
100 Californian, 2s. 9d.
80 Callao Bis, 5s. 3d.
45 Carn Camborne, 2s. 9
75 Chile Gold, 6s. 9d.
100 Chontales, 2s. 3d.
50 Colombian, 9s. 6d.
25 Colorado, 47s. 6d.
70 Devala, 2s. 9d.
100 Denver, 6d.
3 El Callao, £50¼.
30 East Blue Hills, 28s 9
150 Eberhardt, 8d.
100 Ecton, 25s.
55 Frontino, 12s.
90 Glenrock, 4s.
40 Great Holway.
30 Great Laxey, £9⅝.
60 Home Mines, 13s. 3d.
60 Hoover Hill, 7s. 6d.
100 Ind Consolidated 4s
45 Killifreth, 11s. 6d.
50 Kohinoor B, 2s. 3d.
50 La Plata, 5s.
30 Leadhills, 46s. 3d.
80 Lisbon-Berlyn, 9d.
30 La Trinidad, £4.
40 Montana, 46s.
50 Mysore Gold, 39s. 6d.
75 Nouveau Monde, 2s
60 Nundydroog, 9s. 3d.
60 New Emma, 3s. 9d.
80 Orita, 21s. 9d.
45 Organos, 8s. 3d.
35 Oscar Gold, 4s. 6d.
40 Panulcillo, 40s.
80 Potosi (New), 4s. 3d.
60 Prince Royal, 4s. 9d.
50 Prince of Wales, 7s. 6
30 Richmond, £3 5s. 6d.
20 Rom. Gravels,
70 Ruby, 5s.
30 Rio Tinto, £8 8s. 9d.
20 Schwab's Gully, £3 7
70 Shepherds United, 2s.
50 Samuda.
20 Tolima, A. £2 19s.
30 Trevaunance, 46s.
25 United Mexican, 46s 6
40 Violeta, 24s.
40 Van, 28s. 9d.
50 Victoria Gold, 2s. 9d.
30 West Godolphin, 23s 6
30 West Kitty, £8¼.
60 W. Metal & Flow, 15s 6
35 Yeoland Consols.

The following SHARES WANTED for CASH:—

50 Copiapo.
150 Colombian.
100 Frontino.
75 Montana.
60 Mysore
50 Nundydroog.

Railways, Foreign Bonds, Gold and Silver Mines, Miscellaneous Shares, and all Stock Exchange Securities.
ESTABLISHED 1851.
BANKERS: LONDON AND WESTMINSTER.

BEAZLEY AND CO., STOCK AND SHARE DEALERS,
6 AND 7, COLEMAN STREET, LONDON, E.C.
ESTABLISHED 28 YEARS.

BRITISH and FOREIGN MINE SHARES not quoted below BOUGHT and SOLD at CLOSE MARKET PRICES.
ALL BUSINESS DONE AT NET PRICES FOR CASH, ACCOUNT, OR FORWARD DELIVERY.
SELLERS and BUYERS should send FIRM ORDERS at once.
CLOSING PRICES, FRIDAY, 9TH OCTOBER, 4 P.M.

| | Buyers. | Sellers. | | Buyers. | Sellers. |
|---|---|---|---|---|---|
| Almada | £ 0 2 0 | £ 0 3 0 | Montana | £ 2 5 0 | £ 2 7 6 |
| Bratsberg | 0 5 0 | 0 7 6 | Nundydroog | 0 8 6 | 0 10 0 |
| Balkis | 0 0 4 | 0 0 5 | Nouveau Monde | 0 1 9 | 0 2 3 |
| Callao Bis | 0 4 0 | 0 5 0 | New Potosi | 0 4 0 | 0 5 0 |
| California | 0 2 0 | 0 3 0 | New Chile | 0 6 3 | 0 7 3 |
| Colombian | 0 9 0 | 0 10 3 | Oscar, vendors | 0 2 0 | 0 3 0 |
| Colorado | 2 10 0 | 2 15 0 | Oscar, fully paid | 0 3 6 | 0 4 6 |
| Cartago, f. p. | 0 3 0 | 0 4 0 | Orita | 1 0 0 | 1 3 9 |
| Eberhardt | 0 0 3 | 0 1 0 | Organos | 0 7 0 | 0 8 6 |
| East Blue Hills | 1 7 0 | 1 9 0 | Ooregum | 0 2 6 | 0 3 0 |
| Frontino | 0 11 3 | 0 13 9 | Prince of Wales | 0 7 0 | 0 9 0 |
| Home M. Trust | 0 13 0 | 0 15 0 | Prince Royal | 0 4 0 | 0 5 3 |
| Hoover Hill | 0 6 6 | 0 7 9 | Ruby | 0 4 6 | 0 5 6 |
| Indian Consoli. | 0 3 6 | 0 4 6 | Shepherds Uni. | 0 2 0 | 0 3 0 |
| Killifreth | 0 10 0 | 0 12 0 | Schwab's Gully | 3 2 6 | 3 7 6 |
| Lisbon Berlyn | 0 0 0 | 0 0 0 | Untd. Mexican | 2 5 0 | 2 10 0 |
| La Trinidad | 3 15 0 | 4 0 0 | Van | 1 6 3 | 1 10 0 |
| Leadhills | 2 0 0 | 2 5 0 | West Kitty | 8 0 0 | 8 5 0 |
| La Plata | 0 4 0 | 0 5 0 | Wheal Crebor | 0 12 6 | 0 15 0 |
| Mysore | 1 18 9 | 2 1 3 | Wheal Metal | 0 12 6 | 0 15 0 |

INVESTORS should send for BEAZLEY and CO.'S LIST of CLOSEST PRICES, published every Wednesday, which will be forwarded on receipt of STAMPED DIRECTED ENVELOPE.

CASH PURCHASES. — SPECIAL FACILITIES for IMMEDIATE SETTLEMENT and DELIVERY of SHARES.
Shares supplied for FORWARD DELIVERY on BEST POSSIBLE TERMS.
BEAZLEY AND CO., 6 AND 7, COLEMAN STREET, LONDON, E.C.

METALS—FRIDAY, 4 P.M.—TIN, £90 10s. 0d. to £91 0s. 0d.; COPPER, £39 7s. 6d. to £39 15s. 0d.; IRON, 42s. 7½d.; LEAD, £11 5s.
BEAZLEY AND CO., 6 AND 7, COLEMAN STREET LONDON, E.C.

MR. WILLIAM H. BUMPUS, STOCK BROKER AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
[Established at this Address in 1867.]

BUSINESS transacted in ALL STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES of every description.
An INVESTMENT LIST free on application.

SPECIAL BUSINESS in the undermentioned:—

50 Akankoo, 3s. 3d.
150 Almada, 3s.
500 Balkis, 7½d.
75 Bratsberg, 8s. 9d.
250 Chontales, 2s. 9d.
30 Copiapo, £2 13s. 9d.
5 Cape Copper, £21¼.
100 Colombian, 10s. 6d.
120 Callao Bis, 5s. 3d.
100 California, 2s. 9d.
50 Cartago, 4s.
40 Colorado, £2 13s. 9d.
3 Dolcoath.
25 Devon Con., £2 2s. 6d
200 Devon Friendship, 1s.
150 Denver, 6d.
300 Eberhardt, 9d.
40 East Blue Hills, 31s.
150 Frontino, 13s.
50 Great Holway.
50 Great Laxey.
250 Indian Cons., 4s.
100 Kohinoor B, 2s. 6d.
40 Killifreth.
300 La Plata, 5s. 6d.
100 Lisbon-Berlyn.
5 Cape Copper, £21¼.
20 Leadhills, £2⅜.
50 Mysore, £2 1s. 3d.
25 Mason & Barry, £7 8 9
100 Montana, £2 8s.
200 New Chile, 7s.
150 New Potosi, 5s. 3d.
100 New Emma, 6s.
350 Nacupai.
40 Orita, 22s.
100 Organos, 7s. 9d.
200 Ooregum, 3s.
150 Oscar, 5s. 6d.
100 Prince Royal, 6s.
25 Panulcillo, £2.
15 Rio Tinto, £8 11s. 3d.
20 Roman Gravels, £4.
20 Richmond, £3¼.
75 South Caradon, 6s.
500 Silver Peak, 9d.
10 South Condurrow, £7
40 Trevaunance, £2½.
50 United Mex. 46s. 9d.
50 Van, 30s.
25 Wheal Crebor, 14s.
15 Wh. Grenville, £13.
100 W. Godolphin, 23s. 6d
10 West Kitty, £8¼.
70 West Polbreen, 12s. 6
5 Wheal Agar.

Where prices ARE NOT INSERTED offers may be made.
WHEAL GRENVILLE and WEST GODOLPHIN shares recommended.

Mr. BUMPUS devotes SPECIAL ATTENTION to LEGITIMATE MINES, and is in a position to afford reliable information and advice to intending investors, and others in the selection of Shares either for INVESTMENT or SPECULATION. Correspondence invited.
ESTABLISHED 1867.

MR. CHARLES THOMAS,
MINING AGENT AND ENGINEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING ENGINEER, AND STOCK AND SHARE DEALER,
10, COLEMAN STREET, LONDON, E.C.

JUST PUBLISHED. Entirely re-written, post free, One Shilling.
SPARE CASH: WHAT SHALL I DO WITH IT? A work for the guidance of Investors.—Published by ALFRED THOMAS, M.E., 10, Coleman-street, London, E.C.
"Invaluable to those who cannot attend the markets."

ESTABLISHED 1852.
MR. HENRY J. TALLENTIRE,
STOCK BROKER AND MINING SHARE DEALER.
SPECIAL DEALINGS in all BRITISH and FOREIGN Mine Shares.
EVERY INFORMATION and CLOSE PRICES upon application.
OFFICES—21, THREADNEEDLE STREET, LONDON, E.C.
BANKERS: CITY BANK, Threadneedle-street, E.C.

FOR SALE, FOR CASH, 100 OSCAR GOLD MINE FULLY PAID VENDORS' SHARES.
Offers to be made to HENRY J. TALLENTIRE, 21, Threadneedle-street, London.

JOHN B. REYNOLDS,
STOCK AND SHARE DEALER,
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ESTABLISHED 28 YEARS.
BANKERS: LONDON JOINT STOCK.

Transacts business at nett prices in all descriptions of Stocks and Shares, and holds himself personally responsible for the prompt completion of all Contracts, which he passes in his own name.
Mines inspected in any part of the United Kingdom.
Sellers and Buyers of Mining Shares will receive prompt attention.
If interviews required, appointments desirable.
All communications in strict confidence.

MR. J. GRANT MACLEAN,
SHAREBROKER AND IRONBROKER, STIRLING, N.B.
Refers to his Share Market Report on page 1152 of to-day's Journal.

JOHN LENN AND CO. (LIMITED).
BANKERS, and DEALERS in STOCKS and SHARES.
CIRCULAR POST FREE ON APPLICATION.
IT CONTAINS the latest prices of Stocks and Shares, and also shows at a glance the return per cent. of all the leading Securities.
IT CONTAINS a List of Selected Investments paying from 5 to 20 per cent. per annum.
IT CONTAINS a List of Stocks and Shares "Wanted" and "for Sale."
SPECIAL DEALINGS in La Trinidad (Limited), Silver Queen United (Limited), Home Mines Trust, and other popular Investments.
JOHN LENN and CO. (Limited),
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JOHN RISLEY, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
38, CORNHILL, LONDON, E.C.
EAST BLUE HILLS and PRINCE ROYAL.—Specially recommended for investment.
ESTABLISHED 1860.
BANKERS: LONDON and WESTMINSTER, Lothbury, E.C.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED 1862.
BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.
Deals in all descriptions of STOCKS and SHARES at close market prices.

THOS. ELS AND CO., STOCK AND SHARE DEALERS,
6, BOND COURT, WALBROOK, LONDON, E.C
Daily price list may be had on application. Business in Foreign Stocks, Railways, and all Stock Exchange Securities at closest prices.

CHARLES J. SIMS, STOCK AND SHARE DEALER,
3, UNION COURT, OLD BROAD STREET, LONDON, E.C.

MR. W. B. COBB, 29, BISHOPSGATE STREET, LONDON.
Special information and business in New Albion Gold, Tolima, Frontino, Colombians, and other Mines in the United States of Colombia.

IMPORTANT TO INVESTORS, CAPITALISTS, AND TRUSTEES.—On account of the disastrous fire at the printing establishment in Charterhouse Buildings, Clerkenwell, in which our proofs were destroyed, our MONTHLY OCTOBER INVESTMENT CIRCULAR, containing a resumé and forecast of markets and several important investments, has been unavoidably DELAYED in ISSUE. We are, however, prepared to ADVISE our CLIENTS and INVESTORS generally, either by WIRE or LETTER, and will give their communications special attention until re-issue of the Circular which we hope to forward in a few days.

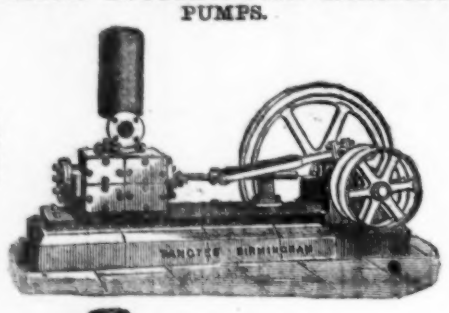
ABBOTT, PAGE, AND CO.,
STOCKBROKERS,
42, POULTRY, LONDON, E.C.
Telegraphic address, "Gosford, London."

# TANGYES LIMITED, CORNWALL WORKS, BIRMINGHAM.

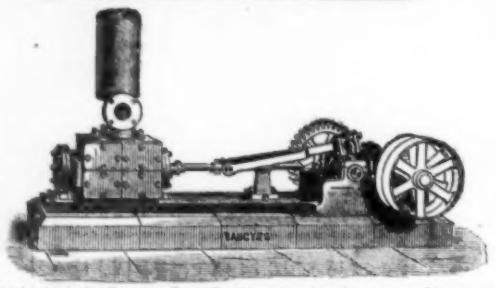
LONDON: 35 Queen Victoria Street. DEPOTS AT NEWCASTLE: St. Nicholas Buildings. MANCHESTER: Deansgate. GLASGOW: Argyle and Hope Streets. (No. 10.)

## HOLMAN'S DOUBLE-ACTION HORIZONTAL PUMPS.

No. 213.



No. 214.



The price includes Pump and Air Vessel on cast iron base, wrought iron crank & fr, plummer blocks and brasses, gun metal strap Lead connecting rod, slings and guide.

The Pulleys are not included in price, size depending on speed of the first motion shaft.

The Fly wheel shown in Fig. 213 is not included in price. 81

| Diam. Pump Barrel .....in. | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 |
|---|---|---|---|---|---|---|---|---|---|
| Length Stroke ..... " | 12 | 12 | 12 | 12 | 12 | 18 | 18 | 18 | 24 |
| Gallns. per hour, 50 ft. per min. | 1450 | 2550 | 4000 | 5800 | 7850 | 10250 | 12600 | 16000 | 23000 |
| Price, No. 213, minus fly wheel and pulleys ..... £ | 18 | 25 | 28 | 35 | 40 | 50 | 65 | 75 | 100 |
| Do. No. 214, minus pulleys... £ | 21 | 28 | 35 | 45 | 55 | 65 | 80 | 90 | 120 |

## HOLMAN'S DOUBLE-ACTION VERTICAL PUMP.

This Pump is usually fitted with Holman's Valves. The Valve Boxes, however, are arranged to take Valves of other types if desired.

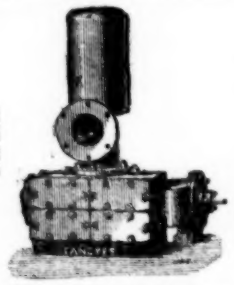
| Diam. Pump. | Length Stroke. | Gallons per hour. | Price, Pump. | Sling, Guide, & Standard, extra. |
|---|---|---|---|---|
| 3 in. | 12 in. | 1,450 | £10 0 0 | £1 5 0 |
| 4 " | 12 " | 2,550 | 14 0 0 | 1 10 0 |
| 4½ " | 12 " | 3,250 | 15 10 0 | 1 15 0 |
| 5 " | 12 " | 4,000 | 17 10 0 | 1 15 0 |
| 6 " | 12 " | 5,750 | 22 0 0 | 3 0 0 |
| 6 " | 18 " | 5,750 | 28 0 0 | 3 15 0 |
| 8 " | 18 " | 10,250 | 35 0 0 | 5 0 0 |
| 9 " | 18 " | 13,000 | 43 0 0 | 6 5 0 |
| 10 " | 18 " | 16,000 | 60 0 0 | 9 0 0 |

In ordering, state whether Pump is required with Sling Guide, &c., as shown in illustration, or not.
Brass Lining to Pump Barrel, extra. See page 68.

## HOLMAN'S DOUBLE-ACTION HORIZONTAL PUMP.

This Pump is usually fitted with Holman's Valves. The Valve Boxes, however, are arranged to take Valves of other types if desired.

No. 212.



| Diam. Pump. | Length Stroke. | Gallons per hour. | Price. |
|---|---|---|---|
| 3 in. | 12 in. | 1,350 | £10 0 0 |
| 4 " | 12 " | 2,500 | 14 0 0 |
| 5 " | 12 " | 3,300 | 17 10 0 |
| 6 " | 12 " | 5,800 | 22 0 0 |
| 7 " | 12 " | 7,500 | 25 0 0 |
| 8 " | 18 " | 10,200 | 35 0 0 |
| 9 " | 18 " | 13,200 | 43 0 0 |
| 10 " | 18 " | 16,000 | 60 0 0 |
| 12 " | 24 " | 23,000 | 85 0 0 |
| 14 " | 24 " | 31,300 | 105 0 0 |

80

## HOLMAN'S DOUBLE-ACTION "LONDON" PUMP

ON PLANK.

The working parts in this Pump are few, simple, and easily accessible.

The inlet and outlet are screwed for wrought iron pipe, but can be provided with brass nozzle for lead pipe if desired.

The pump is well suited for export, and for farm and garden purposes.

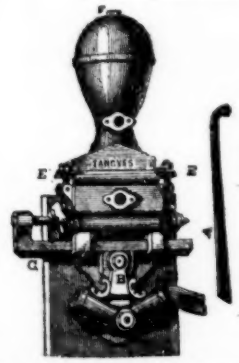
If this Pump is required for ammoniacal liquor or hot water, an extra price is charged.

Delivery Outlet is in front, not at side, as illustrated.

| Diam. of Pump. | Galls. per hour. | Price. |
|---|---|---|
| 2½ ins. | 250 | £3 0 0 |
| 3 " | 390 | 3 10 0 |
| 4 " | 700 | 4 10 0 |
| 5 " | 850 | 6 0 0 |
| 6 " | 1060 | 7 10 0 |

## TANGYES "CALIFORNIA" DOUBLE-ACTION FORCE PUMP

ON PLANK.



The Valves in this Pump can be got at without the removal of a bolt or nut.

The 5 in. Pump has two handles. Extra handle for other sizes, 5s each.

| Diam. of Pump. | Length Stroke. | Double Stroke. | Galls per hour. | Price. |
|---|---|---|---|---|
| 2½ ins | 5 ins. | 15 per min. | 250 | £4 0 |
| 3 " | 5 " | 35 " | 450 | 5 10 |
| 4 " | 5 " | 35 " | 825 | 7 0 |
| 5 " | 5 " | 35 " | 1300 | 8 15 |

84

## HOLMAN'S "LONDON" DOUBLE-ACTION PILLAR PUMP.

This arrangement consists of the "London" Pump attached to a cast iron pillar with Crank Plate, Fly Wheel, and Handle. It is made to work by hand, but for a small extra, the pulley may be had turned for a driving belt.

If this Pump is required for ammoniacal liquor or for hot water, an extra price is charged.

| Diam. Pump. | Gallons per hour. | Price. |
|---|---|---|
| 2½ ins. | 250 | £7 5 0 |
| 3 " | 390 | 8 5 0 |
| 4 " | 700 | 10 0 0 |
| 5 " | 850 | 14 0 0 |

## TANGYES "CALIFORNIA" DOUBLE-ACTION PILLAR PUMP.

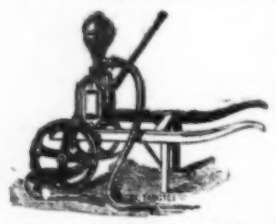


This arrangement consists of the "California" Pump attached to a cast iron pillar with Crank Plate, Fly Wheel, and Handle. It is made to work by hand, but for a small extra, the pulley may be had turned for a driving belt.

| Diam. Pump. | Gallons per hour. | Price. |
|---|---|---|
| 2½ ins. | 250 | £ 9 0 0 |
| 3 " | 450 | 10 10 0 |
| 4 " | 825 | 12 5 0 |
| 5 " | 1300 | 16 15 0 |

85

## HOLMAN'S "LONDON" PUMP ON BARROW.



This arrangement consists of the "London" Pump, shown on page 84, mounted on Barrow. It makes a useful fire engine, and will discharge a good supply of water through hose pipe to a height of 40 or 50 ft.

Each Pump is supplied with Half Union on suction and delivery, but no Hose.

If this Pump is required for ammoniacal liquor, or for hot water, an extra price is charged.

The Pump is fitted to Barrow as illustrated.

| Diam. Pump ....in. | 2½ | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Price.....£ | 5 0 | 5 10 | 6 10 | 8 0 | 9 10 |

## TANGYES "CALIFORNIA" DOUBLE-ACTION FORCE PUMP ON BARROW.

This arrangement consists of the "California" Pump, shown on page 84, mounted on Barrow.

| Diam. of Pump. | Price. |
|---|---|
| 2½ in. | £6 10 |
| 3 " | 7 10 |
| 4 " | 9 0 |
| 5 " | 10 15 |

Each Pump is supplied with Half Union on suction and delivery, but no Hose.

The 5 in. Pump has two Handles. Extra Handle for other sizes, 5s. each.

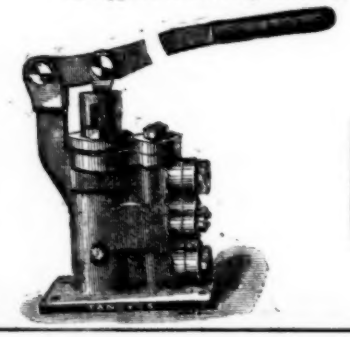
86

## GUN-METAL HAND FEED PUMP OR HYDRAULIC PRESSURE PUMP.

| Diam. of Plunger..... | 1 in. | 1¼ in. | 1½ in. |
|---|---|---|---|
| Price without Plank ... | 50/- | 65/- | 80/- |
| Price with Plank ..... | 58/- | 73/- | 88/- |

## HAND FEED PUMP.

As supplied to meet regulations of German Government.

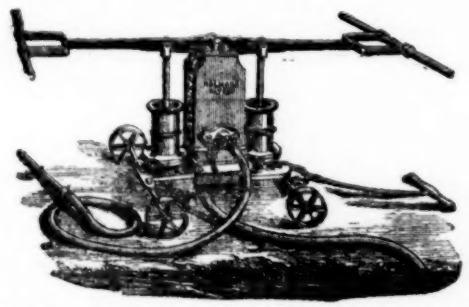


GUN-METAL PLUNGER, VALVES, AND SEATS.

| Diam. of Ram. | Price. |
|---|---|
| 2 in. | £6 0 0 |
| 2½ " | 7 10 0 |

90

## HOLMAN'S PORTABLE IRRIGATING PUMP AND FIRE ENGINE.



This Pump has brass barrels, doorway for immediate access to the valves; wrought iron double lever handles, with sockets to shift; brass union on suction and delivery ready for connecting hose, the whole mounted on four strong wheels, with a drag handle and turn carriage. The Pump can, if desired, be easily disconnected from the carriage, and bolted down, as a fixture, to timber or stone.

| | | | | | |
|---|---|---|---|---|---|
| With two 4 in. brass barrels, for about 1600 gallons per hour..... | | | | | £15 0 |
| " 5 " " | " | 2900 | " | " ..... | 21 0 |
| " 6 " " | " | 3600 | " | " ..... | 26 0 |
| " 7 " " | " | 4900 | " | " ..... | 34 0 |

Suction and Delivery Hose and Branch Pipes not included in above Prices.

91

## TANGYES "CORNISH" LIFT AND FORCE PUMP.

No. 235.

Suitable for forcing water into tanks, for extinguishing fires, washing, and many other purposes.

The handle may be set at any angle with the spout, and the latter may be set either right, left, or in front. Spout has also screwed nozzle and brass cap.

| Diameter of Barrel. | Price without Plank. | Price on Plank as shown. | Gallons per hour. |
|---|---|---|---|
| 2½ in. | 30/- | 38 - | 180 |
| 3 " | 39/- | 47/- | 260 |
| 3½ " | 50/- | 58/- | 370 |

No. 234.

TANGYES

## "CORNISH" LIFT PUMP.

Has improved clack valves, which are readily accessible without disturbing the pipe. It is fitted for either lead or wrought iron pipe.

The Pump is now made with square base-plate and solid flange on bottom—not as shown in illustration.

The handle may be set at any angle with the spout.

| Diameter of Barrel. | Price without Plank as shown. | Price on Plank. | Gallons per hour. |
|---|---|---|---|
| 2½ in. | 17/- | 25/- | 180 |
| 3 " | 24/- | 32/- | 260 |
| 3½ " | 30/6 | 38/6 | 370 |

87

Copyright.—Entered at Stationers' Hall.

ONE man can EASILY tip ANY WEIGHT in these wagons.

# R. HUDSON'S

## Patent Steel Trucks, Points and Crossings,

PORTABLE RAILWAY, STEEL BUCKETS, &C., &C. GILDERSOME FOUNDRY, NEAR LEEDS.

**Patented in Europe, America, Australia, India, and British South Africa, 1875, 1877, 1878, 1881, and 1883.**

**N.B.—The American, Indian, Australian, and Spanish Patents on Sale.**

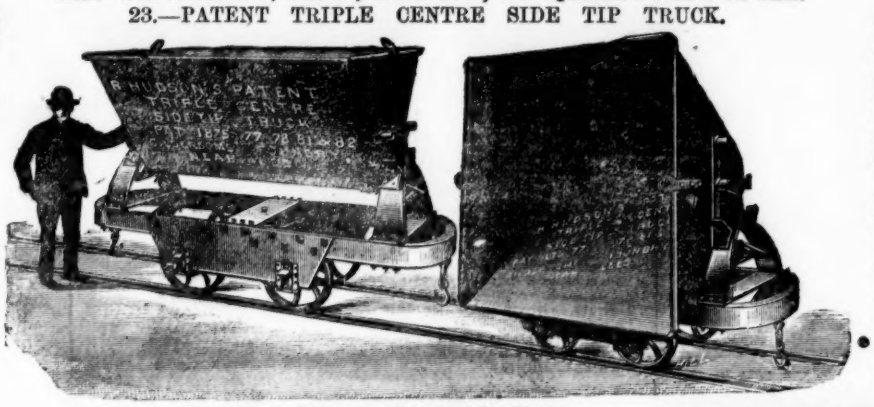
Registered Telegraphic Address:—"GILDERSOME, LEEDS." A. B. C. Code used.

(Near Gildersome Station, G.N.R., Main Line, Bradford to Wakefield and London, *vis* Laisterdyke and Ardsley Junctions.)

TELEPHONE No. 14, LEEDS EXCHANGES.

17.—SELF-CONTAINED TURNTABLE,
Requiring no Foundations.

23.—PATENT TRIPLE CENTRE SIDE TIP TRUCK.

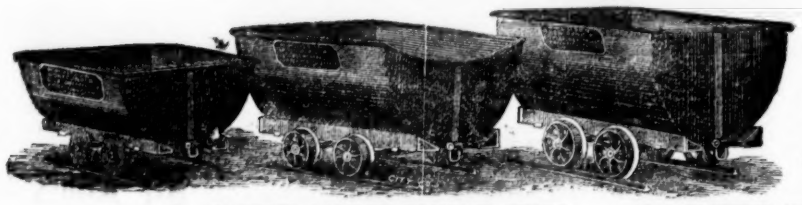


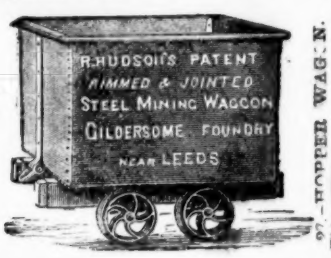
One man can tip any weight with ease.

**Upwards of 25,000 of these Trucks and Wagons have been supplied to the South African Diamond Mines; American, Spanish, Indian, and Welsh Gold, Silver, Copper, and Lead Mines; Indian and Brazilian Railways, and to Railway Contractors, Chemical Works, Brick Works, and Coal and Mineral Shippers, &c., &c., and can be made to lift off the underwork, to let down into the hold of a vessel, and easily replaced. They are also largely used in the Coal and other Mines in this country, and are the LIGHTEST, STRONGEST, and most CAPACIOUS made, infinitely stronger and lighter than wooden ones, and are all fitted with R. H.'s Patent "Rim" round top of wagons, requiring no rivets, and giving immense strength and rigidity. End and body plates are also joined on R. H.'s patent method, dispensing with angle-irons or corner plates.**

1.—PATENT STEEL END TIP WAGONS.

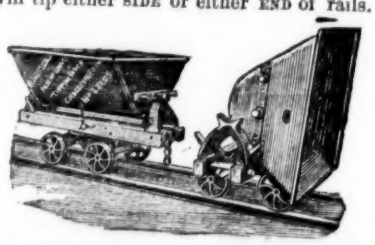
7.—PATENT STEEL MINING WAGONS.



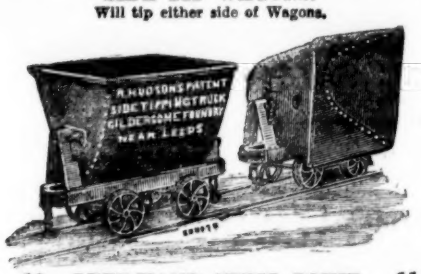



97.—HOPPER WAGON.

2. PATENT UNIVERSAL TRIPLE-CENTRE STEEL TIPPING TRUCK,
Will tip either SIDE or either END of rails.



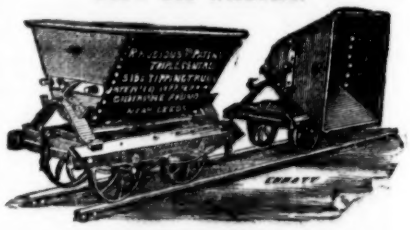
8.—PATENT DOUBLE-CENTRE STEEL SIDE TIP WAGONS.
**Will tip either side of Wagons.**



12.—PATENT STEEL HOPPER WAGON, with BOTTOM DOORS,

13.—PATENT STEEL HOPPER WAGON.

3.—PATENT TRIPLE-CENTRE STEEL SIDE TIP WAGONS.

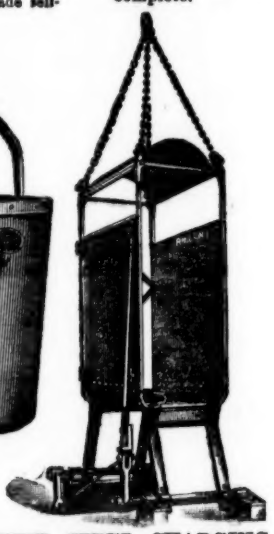


10.—LEFT-HAND STEEL POINT AND CROSSING.

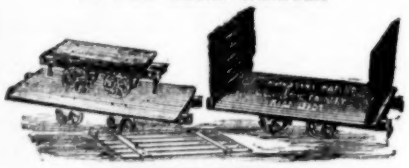
11.—RIGHT AND LEFT-HAND STEEL POINT AND CROSSING.

14.—SELF-RIGHTING STEEL TIP BUCKET.
**The "Catch" can also be made self-acting if desired.**

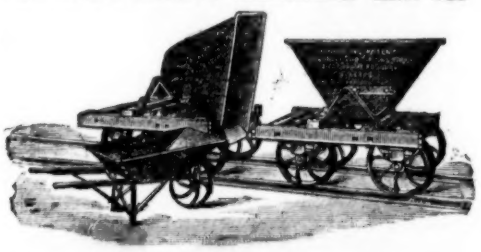
15.—R. HUDSON'S Patent Steel Cage and "Fallers," &c., complete.



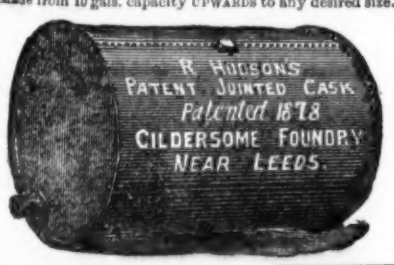
4.—PATENT STEEL PLATFORM OR SUGAR CANE WAGON.



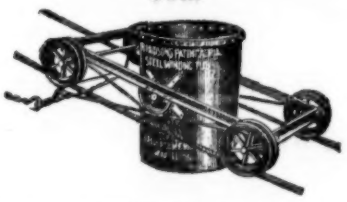
24.—R. H.'s PATENT BALANCED END TIP



5.—PATENT STEEL CASK.
**As supplied to H.M. War Office for the late war in Egypt).**
**DOUBLE the STRENGTH of ordinary Casks without any INCREASE in weight.**
**(Made from 10 gals. capacity UPWARDS to any desired size.)**

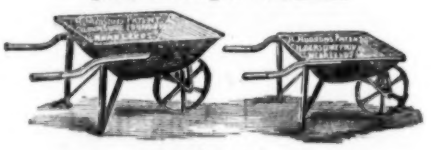



18.—"AERIAL" STEEL WINDING TUB.



**Largely employed in the South African Diamond Fields.**

16.—PATENT STEEL WHEELBARROWS.
Made to any Size.
**Lightest and Strongest in the Market.**



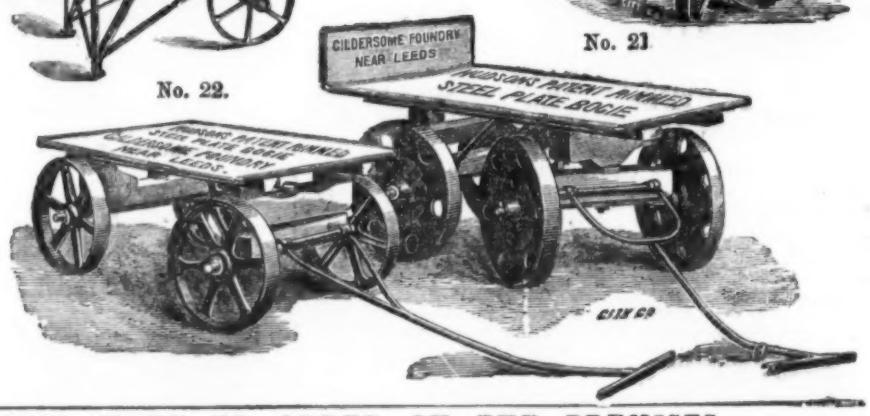
**A great success.**

19.—PATENT STEEL CHARGING BARROW.
**Double the strength and lighter than ordinary Barrows.**

25.—PIG-IRON BARROW,
R. H.'s Patent

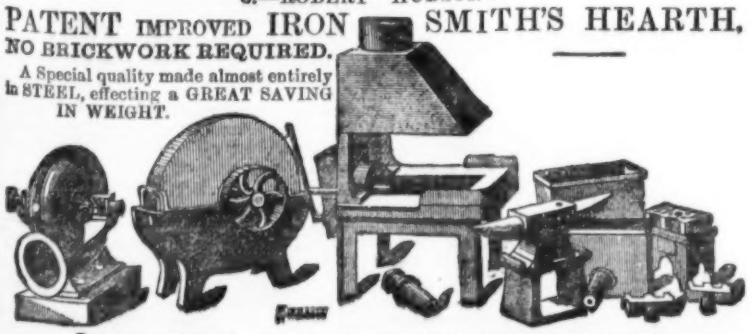
No. 21

No. 22.




6.—ROBERT HUDSON'S
PATENT IMPROVED IRON SMITH'S HEARTH,
NO BRICKWORK REQUIRED.

A Special quality made almost entirely in STEEL, effecting a GREAT SAVING IN WEIGHT.



Large numbers in use by all the principal Engineers in this country and abroad.

ALL KINDS OF BOLTS, NUTS, AND RIVETS MADE TO ORDER ON THE PREMISES.


Copyright.—Entered at Stationers' Hall.

Pumping Engines for Mines, Water Works, Sewage Works, and General Purposes.

CATALOGUES ON APPLICATION.

# PUMPING & MINING MACHINERY.

## HATHORN, DAVEY, & Co., LEEDS.

Hydraulic Pumps, Winding Engines, Air Compressors, Man Engines, Capstans, &c., &c.

See Exhibits at Stand No. 1195, West Annexe; and also in the Electric Lighting Department, Inventions Exhibition, London.

---

This Drill may be seen at work any hour from 10 A.M. to 6 P.M. at the International Inventions Exhibition, Stand No. 194, North Court, South Galleries.

FIRST SILVER MEDAL, ROYAL CORNWALL POLYTECHNIC —Highest Award for Effectiveness in Boring, and Economy in the Consumption of Air.

JUBILEE EXHIBITION, 1882.

THE PATENT

## "CORNISH" ROCK DRILL.

FIRST SILVER MEDAL, MINING INSTITUTE OF CORNWALL.

FIRST AWARD BORING CONTEST DOLCOATH MINE, DECEMBER, 1881.

Prices and particulars on application to the Manufacturers,

HOLMAN BROTHERS,
CAMBORNE FOUNDRY AND ENGINE WORKS,
CAMBORNE, CORNWALL.

ENGINES, AIR COMPRESSORS, TUNNELLING CARRIAGES, TRIPODS, &c.,
From own design, or to order.

---

THE PATENT

## "ECLIPSE" ROCK-DRILL AND "RELIANCE AIR-COMPRESSOR."

First Silver Medal awarded at Boring Competition, East Pool Mine, Sept. 1883.

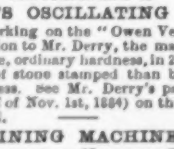
SILVER MEDAL—PARIS, 1878—HIGHEST AWARD

Are NOW SUPPLIED to the ENGLISH, FOREIGN, and COLONIAL GOVERNMENTS, and are also IN USE in a number of the largest MINES, RAILWAYS, QUARRIES, and HARBOUR WORKS in GREAT BRITAIN and ABROAD.

FOR ILLUSTRATED CATALOGUE AND PRICES, apply to—
HATHORN & CO., 22, Charing Cross, London, S.W.

---

For Excellence and Practical Success of Engines.



Represented by Model exhibited by this Firm.

## HARVEY AND CO.,

(LIMITED)

ENGINEERS AND GENERAL MERCHANTS,
HAYLE, CORNWALL.

London Office—186, GRESHAM HOUSE, E.C.

MANUFACTURERS OF

PUMPING and other LAND ENGINES and MARINE STEAM ENGINES of the largest and most approved kinds in use, SUGAR MACHINERY, MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL. SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF

HUSBAND'S OSCILLATING STAMPS.

These Stamps are now working on the "Owen Vean" Mine, near Marazion, and may be seen on application to Mr. Derry, the manager. Four heads stamp from 80 to 90 tons of tin stone, ordinary hardness, in 24 hours. The consumption of fuel is much less per ton of stone stamped than by the old system, and the wear and tear also much less. See Mr. Derry's paper (extract of which appeared in the *Mining Journal* of Nov. 1st, 1884) on these stamps read before the Mining Institute of Cornwall.

SECOND-HAND MINING MACHINERY FOR SALE,
In Good Condition, at Moderate Prices—viz,

PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES, STEAM CAPSTANS; ORE CRUSHERS; BOILERS and PITWORK of various sizes and descriptions: and all kinds of MATERIALS required for MINING PURPOSES.

---

PATENT IMPROVED

## "INGERSOLL ROCK DRILL."

MEDALS AND HIGHEST AWARDS

SEVEN YEARS IN SUCCESSION,
FOUR IN ONE YEAR.

American Institute, 1872.
American Institute, 1873.
London International Exhibition, 1874.
Manchester Scientific Society, 1875.
Leeds Exhibition, 1875.
Royal Cornwall Polytechnic, 1875.
Rio de Janeiro Exhibition, 1875.
Australia Brisbane Exhibition, 1876.
Philadelphia Exhibition, 1876.
Royal Cornwall Polytechnic, 1877.
Mining Institute of Cornwall, 1877.
Paris Exhibition, 1878.

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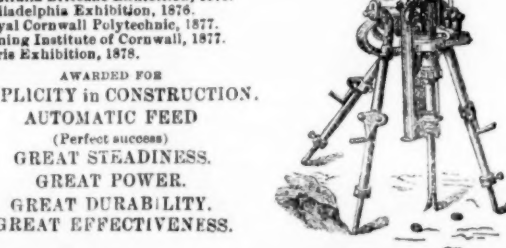

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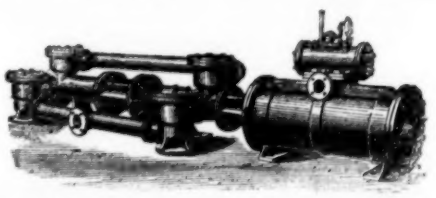

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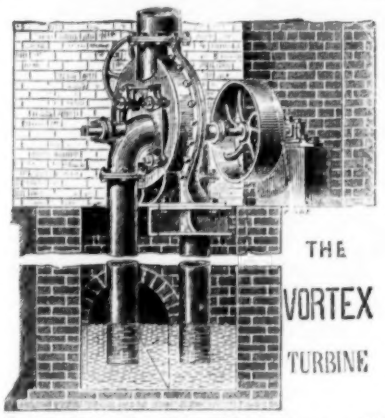

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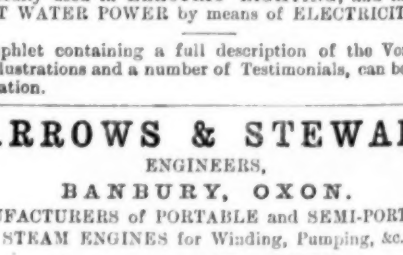

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Offices of the Review: 342, Strand, W.C
Remittances payable to W. T. Pringle.

# Original Correspondence.

## THE COLONIAL AND INDIAN EXHIBITION, LONDON, 1886.

Sir,—I have just received a copy of the *Mining Journal* of the 27th June, containing a letter from Mr. Thomas Cornish on the subject of "A Mineral Exhibition for 1886." The mail closes in another hour or so, and I shall not, therefore, be in a position to describe fully the nature and extent of the mineral exhibits which will be contributed by Victoria—the greatest gold-producing country of the British Empire. I may mention, however, that for more than eight months past the Commissioners for this colony have been engaged upon the collection of such exhibits as those indicated by the correspondent in question; and I am now in a position to state that so far as this colony is concerned a very comprehensive mining display will be made. The Mining Department has received a special vote of 500*l.* for the purpose of completing their collections, and in addition several of the leading gold mining companies—such as the Band and Albion (Ballarat), Long Tunnel (Walhalla), and United Devonshire (Sandhurst), will send some magnificent specimens of gold-bearing quartz, with models of all kinds of machinery used in their mines both for underground and surface operations. We are endeavouring to induce one of our leading engineering firms to send a quartz crushing battery, but there are several grave objections to showing such a cumbersome and noisy piece of machinery at work in the fairy-like grounds of South Kensington. In any case your correspondent may rest satisfied that the gold mining industry will be creditably represented, and further that the great bulk of our exhibits will be presented to the Colonial Museum at the close of the Exhibition, so that they will remain on permanent view in London. I enclose official programme, and remain, yours sincerely,

*Melbourne, August* 25, 1885. JAMES THOMSON, Secretary.

Royal Commission for Victoria, Australia.
Offices: 20, Market Buildings, Market-street.

[OFFICIAL PROGRAMME.]

### COLONIAL AND INDIAN EXHIBITION, LONDON, 1886.
### ROYAL COMMISSION FOR VICTORIA.

President: JOSEPH BOSISTO, Esq., M.P., J.P.

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| The Honourable Thomas Bent, M.P., J.P., Mayor of Brighton. | Andrew Plummer, Esq., M.D., J.P., President of the National Agricultural Society. |
| The Honourable John Woods, M.P. | John Blyth, Esq., J.P., President of the Melbourne Chamber of Commerce. |
| The Honourable Phillip Russell, M.L.C., President of the Ballarat Agricultural and Pastoral Association. | Robert Caldwell, Esq., President of the Chamber of Manufacturers. |
| Thompson Moore, Esq., M.P., J.P. | Harry Upton Alcock, Esq., J.P. |
| John McIntyre, Esq., M.P., J.P. | William Glover, Esq., J.P. |
| John Nimmo, Esq., M.P., J.P. | David Mitchell, Esq., J.P. |
| Charles Smith, Esq., M.P., J.P. | Andrew Rowan, Esq., J.P. |
| Alexander Young, Esq., M.P., J.P. | William Kerr Thomson, Esq., J.P. |
| P. B. Wallace, Esq., M.P. | Henry Burrows, Esq. |
| Godfrey Downs Carter, Esq., J.P., Mayor of Melbourne. | Jenkin Collier, Esq., and John B. Whitty, Esq. |

Secretary: JAMES THOMSON, Esq.

Offices of the Commission: 20, Market Buildings, Market-street, Melbourne.

The Government of Victoria having decided that the colony shall be officially represented at the forthcoming Colonial and Indian Exhibition, to be opened in London about the middle of May, 1886, it is necessary that early action should be taken to ensure a full and adequate representation of our varied products and resources, and to show our social and material advancement. His Royal Highness the Prince of Wales, who is President of the Royal Commission, appointed by Her Majesty the Queen, for organising and carrying out the Exhibition, is manifesting a deep and earnest interest in the undertaking, and it is his particular desire that the British possessions in every part of the world should join in making a display fully worthy of the Empire. In a communication to the Government of this colony, His Royal Highness writes:—

"In assuming the active Presidency of this Commission, I am desirous of having the opportunity of bringing prominently under notice the development and progress which have been made in the various parts of the British Empire, trusting that a more intimate knowledge may thus be obtained of the vast fields for enterprise which exist throughout the British dominions."

This will be the first occasion on which the resources and industrial strength of the various British possessions will have been brought together, not in rivalry with other countries or with each other, but for the purpose of setting forth the material wealth of every portion of the Empire, and the social progress and development of the people in all parts of Her Majesty's dominions. At past Exhibitions the principal burden has been sustained by the great nations of the world; but at London next year these will have no share in the undertaking, the success of which will depend solely upon India, Canada, Australasia, the Cape, and the other British colonies. Situated as these are in every division of the globe, and possessing as they do such greatly diversified resources, an immense and varied collection of natural products, arts, and manufactures will no doubt be brought together. The resources and relative progress of each will be subjected to keen comparison, and it is extremley desirable, therefore, that no effort should be spared to place Victoria, the most populous and one of the most prosperous of the Australasian group, in the front rank. The Government, through the various departments of the public service, will, as in previous Exhibitions, contribute materially to the representation of our varied natural resources and the social and material advancement of the community; but it will depend largely upon producers, manufacturers, and others to make a display worthy of the position attained by Victoria in all branches of productive and manufacturing industry, and commensurate with the extent of her commercial relations with the Mother Country and the other nations of the world.

The Royal Commission appointed to devise and carry out measures for the efficient representations of this colony desire that full advantage should be taken of the time now remaining for the preparation of high-class exhibits; and the appended schedule, which affords an indication of the character of the Exhibition, will assist intending exhibitors to make an immediate commencement.

As the cultivation of the soil constitutes the employment of a large portion of our population, it is desired that the most ample opportunity be afforded to agriculturists, vignerons, horticulturists, florists, fruit growers, and others, in order that there may be such a complete display of their several products as will clearly demonstrate the fertility of our soil and the genial nature of our climate. London being the recognised wool emporium of the world, it is necessary also that the great wool-growing industry should form a prominent feature in the collection sent from this colony, and early preparations should therefore be made by flock owners to secure the best possible samples.

Great interest will be taken in the timbers of the various colonies, and in order that there may be a complete representation of this department, saw mill proprietors, timber merchants, and others should make early preparations for forwarding well-seasoned and fair-sized specimens. Wherever practicable, show cases and other fittings in the Victorian Court will be constructed of blackwood or other suitable native timber.

Mining being one of the leading industries of the colony, a comprehensive collection, illustrating the various processes of mining, models of machinery and appliances, together with quartz and alluvial specimens, will be required in order to illustrate the system of gold mining in this colony. To perfect this branch, exhibits of building stone, minerals, and geological specimens of all kinds are required, and the co-operation of the mining community, quarry proprietors, and others is requested.

It is equally desirable that Victorian manufacturers, especially those engaged in the utilisation of the natural products of Australia, should prepare exhibits of the highest class, as the Exhibition will bring together the best descriptions of workmanship from all parts of the Empire. From the advanced position occupied by the manufacturers of Victoria, the exhibits in this department should form a prominent feature in the Exhibition.

An exhibition of colonial wines will be organised by the Royal Commission of England during the currency of the Exhibition, and as this will afford a most favourable opportunity for introducing the products of our vineyards to the British public, Victorian vignerons should spare no effort to be particularly well represented on the occasion. It is intended to afford facilities for the sale of Australian wines in the Exhibition, and vignerons should be prepared to forward bulk samples of sound, well matured wines, such as will creditably maintain the high reputation that this colony has gained.

Every branch of art should, His Royal Highness considers, be fully represented as far as practicable, and, as a high standard has already been reached here, it is hoped that our artists will assist in making the Victorian display thoroughly comprehensive in every respect. Scientific, literary, and other societies can also render valuable assistance in preparing collections showing the extent of scientific research of this country, as well as the advancement and spread of learning. Municipal and other bodies, by their co-operation, can also render material assistance in illustrating the system of local government and the social and sanitary condition of the country.

Special arrangements will be provided for the practical illustration, by means of one special kitchen, of all the Colonial Frozen Meat Industries, and of the Colonial Preserved Meats, Fish, and Vegetables, should the various producers be prepared to furnish the necessary supply. This department will be carried out by the Royal Commission of England, in order that the due representation of the various interests concerned may be maintained.

There will also be a Colonial Fruit and Vegetable Market, which, it is hoped, will be supplied by fortnightly shipments. This department will also be under the control of the Royal Commission of England.

A limited space will be set apart for the exhibition of Living Animals indigenous to the several countries and colonies taking part in the Exhibition, and any persons in Victoria in a position to contribnte to this department should therefore communicate with the Commission for this colony.

In the despatch of His Royal Highness it is stated that—"In assuming the control of these various departments, the Royal Commission wishes to afford to the actual producers all the advantages of a fair display in the Exhibition. The importers will, no doubt, hereafter benefit, but, at the present time, the interests of the producers, as exhibitors, are of the first consideration to me; and here I may mention that in these departments, as well as generally throughout the Exhibition, I have decided that only *bona fide* colonists can, through their respective Governments, participate in the Exhibition; it will not, therefore, be possible for the Royal Commission to entertain any applications, upon any pretence whatever, from colonial importers, or agents in this country."

His Royal Highness has further decided that commemerative Medals shall be given to all those taking part in the Exhibition; and he hopes to have the assistance of specialists of known repute, who will commence to make, at the opening of the Exhibition, exhaustive reports of the resources of the various colonies. These reports, issued at an early stage, will take the place of the jury systems of previous Exhibitions.

All exhibits from country districts will be conveyed over the Victorian lines of railway free of charge, and stored in the goods sheds at Spencer-street Railway Station, pending their shipment to the scene of the Exhibition. Intending exhibitors are particularly requested to place themselves in early communication with the secretary to the Victorian Commission, who will furnish forms of application for space, together with all necessary information.

## CLASSIFICATION OF EXHIBITS FOR THE VICTORIAN COURT.

*Division A.—Works of Art.*

Class 1.—Oil Paintings.—Paintings on canvas, on panel, and on other grounds.

Class 2.—Various Paintings and Drawings.—Miniatures, water colour paintings, pastels, and drawings of every kind; paintings on enamel, earthenware, and porcelain; cartoons for stained glass windows and frescoes.

Class 3.—Sculpture and Die Sinking.—Sculpture in high relief, bas reliefs, chased and repoussé work; medals, cameos, engraved stones.

Class 4.—Architectural Drawings and Models.—Studies and details; elevations and plans of buildings.

Class 5.—Engravings and Lithographs.—Engravings; coloured engravings; lithographs executed with pencil and with brush, chromo lithographs.

*Division B.—Education and Instruction, Apparatus and Processes of the Liberal Arts.*

Class 6.—Education of Children, Primary Instruction, Instruction of Adults.—Plans and models of schools; system of management and furniture of such establishments; appliances for instruction suitable for physical, moral, and intellectual training; books, maps, apparatus, and models; works of pupils of both sexes; libraries and publications.

Class 7.—Organisation and appliances for secondary instruction.

Class 8.—Organisation, methods, and appliances for superior instruction.

Class 9.—Printing, Books, Newspapers, and Periodicals.—Specimens of typography; autographic proofs; lithographic proofs, black or coloured; proofs of engravings; new books and new editions of books already known; collections of works forming special libraries; newspapers bound in volumes; periodical publications; drawings, atlases, and albums.

Class 10.—Stationery, bookbinding, painting and drawing materials.

Class 11.—General application of the arts of drawing and modelling.

Class 12.—Photographic Proofs and Apparatus.—Photographs on paper, glass, wood, and enamel; heliographic engravings; lithographic proofs; photo lithographic proofs; photographic stereotypes; stereoscopic proofs and stereoscopes; enlarged photographs; colour photographs.

Class 13.—Musical instruments of all kinds, and parts thereof, such as organ pipes, &c.

Class 14.—Medicine, hygiene, and public relief.

Class 15.—Mathematical and philosophical instruments.

Class 16.—Maps and Geographical and Cosmographical Apparatus. Typographical, geographical, geological, hydrographical, and astronomical maps, atlases, &c.; physical maps of every kind; plans in relief; terrestrial and celestial globes and spheres; statistical works and tables; tables and ephemerides for the use of astronomers and sailors.

*Division C.—Furniture and Accessories.*

Class 17.—Furniture.—Sideboards, book cases, tables, dressing tables, sofas, couches, billiard tables, &c., manufactured from Australian woods.

Class 18.—Upholsterers' and decorators' work.

Class 19.—Crystal, glass, and stained glass.

Class 20.—Pottery, &c.—Biscuit ware; hard and soft paste porcelains; fine earthenware with coloured glazing, &c.; earthenware biscuit; terra cotta; enamelled lava; fancy bricks and tiles; stoneware.

Class 21.—Carpets, mats, &c.

Class 22.—Goldsmiths' and silversmiths' work.

Class 23.—Bronzes and various art castings.

Class 24.—Clocks and watches, including separate parts of clocks of large or small size.

Class 25.—Apparatus and processes for heating and lighting, including fire grates, fire places, stoves, and hot air stoves; accessory objects for heating; kitchen ranges, and apparatus for heating and cooking by gas; apparatus for heating by the circulation of hot water, steam, or heated air; ventilating apparatus; drying apparatus; drying stoves.

Class 26.—Perfumery and toilet soaps.

Class 27.—Leather work, fancy articles, and basket work.

*Division D.—Textile Fabrics, Clothing, and Accessories.*

Class 28.—Woollen Yarn and Fabrics.—Combed wool, woollen yarn; cloth and other woollen fabrics; blankets; felt of wool or hair for carpets, hats, shoes; woollen fabrics, unmilled or slightly milled; flannel tartans; swansdown; shawls, pure or mixed.

Class 29.—Silk.—Raw and thrown silk; floss silk yarn.

Class 30.—Clothing.—Men's clothes; women's clothes; waterproof clothing; men and women's head dresses; artificial flowers and feathers; wigs and works in hair; boots and shoes; children's clothes; clothing peculiar to various professions and trades; native costumes.

Class 31.—Jewellery and Precious Stones.—Jewellery in precious metals (gold, platinum, silver, aluminium), chased filigree, set with precious stones, &c.; diamonds, precious stones, pearls, and imitations.

Class 32.—Portable weapons and hunting and shooting instruments.

Class 33.—Travelling Apparatus and Camp Equipage.—Trunks, valises, saddlebags, &c.; dressing cases and travelling cases; various objects; travelling rugs, cushions, caps, travelling costumes, and boots; tents and camp equipage; beds, hammocks, folding chairs, &c.

*Division E.—Timber, Wool, Leather, and other Raw and Manufactured Products.*

Class 34.—Products of the Cultivation of Forests and of the Trade appertaining thereto.—Specimens of different kinds of forest trees; wood for cabinet work, for firewood and for building; timber for shipbuilding, staves, cleft timber, shingles; cork—bark for textile purposes; tanning, colouring, odoriferous, and resinous substances; products obtained from forests, charcoal and dried wood, raw potash, turnery, basket work, straw work, &c.

Class 35.—Products of Hunting, Shooting, Fishing, and Spontaneous Products, Machines and Instruments, connected therewith.—Collections and drawings of terrestrial and amphibious animals, of birds, eggs, fishes, of cetacea, of mollusca, and crustacea; products of hunting and shooting; products of fishing; vegetable products of the earth obtained without culture, mushrooms, truffles, wild fruit, food and fodder, useful barks and filaments, resinous gums; traps and snares; apparatus and instruments for gathering the products obtained without culture.

Class 36.—Agricultural Products not Used for Food.—Textile materials, flax and hemp, scutched and unscutched, textile vegetable fibres of all kinds; wool, washed or unwashed (see special schedules) cocoons of the silkworm; various agricultural products used in manufactures, in pharmacy, and for household purposes, oleaginous plants, oil, wax, resin; tobacco in leaves or manufactured; tanning and dyeing substances; preserved fodder and substances specially intended for feeding cattle.

Class 37.—Chemical and Pharmaceutical Products.—Acids, alkalis, salts of all kinds; various products of chemistry; wax and fatty substances, soaps and candles; raw materials used in perfumery; resins, tar, and the products derived from them; essences and varnishes; various coating substances; dyes and colours; mineral waters and natural and artificial aërated waters; raw materials used in pharmacy; medicines, simple and made up.

Class 38.—Leather and Skins.—Raw materials used in the dressing of skins and leather; tanned, curried, dressed, or dyed leather; varnished leather; morroco and sheep skin; skins grained, chamoyed, tawed, dressed, or dyed; prepared skins for glove making; skins and furs, dressed and dyed; parchment; gutwork; strings for musical instruments.

*Division F.—Apparatus and Processes used in the Mechanical Industries, Carriages, Harness, &c*

Class 39.—Agricultural Implements and Processes used in the cultivation of Fields and Forests.—Plans of culture, distribution, and management of crops; apparatus and works for agricultural engineering, draining, irrigation, &c.; plans and models of farm buildings; tools, implements, machines, and apparatus used in husbandry, sowing and planting harvesting, preparation and preservation of crops.

Class 40.—Apparatus and Processes used in Agricultural Works, and in Works for the Preparation of Food.—Apparatus used in agricultural works; manufacture of artificial manures; of drain pipes; cheese factories; dairies; apparatus used in preparing flour, fecula, starches, oils; apparatus used in breweries, distilleries, sugar manufactories, and refineries.

Class 41.—Apparatus used in chemistry, pharmacy, and tanning.

Class 42.—Machines and apparatus in general.

Class 43.—Carriages and Wheelwrights' Work.—Carriages, public, state, and private; chairs; bicycles, &c.

Class 44.—Harness and Saddlery.—Saddles, bridles, and harness, for all kinds of horses; whips, &c.

Class 45.—Railway plant of all kinds.

Class 46.—Telegraphic apparatus and processes.

Class 47.—Building Materials, Apparatus, and Processes of Civil Engineering, Public Works, and Architecture.—Building materials, stone, wood, metals; ornamental stone; lime, mortar, cements, artificial stone, and concrete; asphalte; roofing tiles; bricks, paving tiles; slates; locksmiths' work, locks, padlock; railings, balconies, banisters, &c.; models, plans, and drawings of public works, bridges, viaducts, aqueducts, drains, canal bridges, dams, weirs, &c.; lighthouses; public buildings for special purposes; buildings for civil purposes; mansions and houses for letting; workmen's towns, industrial dwellings, &c.

Class 48.—Navigation and Life Saving.—Drawings and models of slips, graving docks, floating docks, &c.; drawings and models of vessels of all kinds, sea going and for rivers; apparatus for swimming, diving, and for saving life at sea; pleasure boats, yachts, &c.

Class 49.—Materials and apparatus for military purposes.

*Division G.—Agricultural and other Alimentary Products.*

Class 50.—Cereals, Farinaceous Products, and Products derived from them.—Wheat, rye, barley, rice, millet, maize, and other cereals, in grain and in flour (full particulars as to quantity, &c., given in special schedules); grain without husks, and groats; tecula, from potatoes, rice, lentils, &c.; gluten; tapioca, sago, arrowroot, cassava, and other fecula; compound farinaceous products, &c.; Italian pastes, vermicelli, macaroni; alimentary preparations, as substitutes for bread, home-made paste, &c.

Class 51.—Bread, Biscuits, &c.—Various kinds of bread, with or without yeast, fancy bread, compressed bread for travelling, military campaigns, &c.; gingerbread and biscuits of all kinds for export.

Class 52.—Fatty Substances used as Food.—Milk and eggs; fatty substances and oils good for food; preserved milk; fresh and salt butter; cheese; eggs of all kinds.

Class 53.—Meat and Fish.—Meat, frozen for export; salt meat of all kinds; meats, preserved by various processes; meat and soup cakes; hams and prepared meats; poultry and game; salt fish; fish in barrels; fish preserved in oil; crustacea and shell-fish, lobsters, shrimps, oysters, potted oysters, anchovies, &c.

Class 54.—Vegetables and Fruits.—(If practicable special arrangements will be made for conveying fresh vegetables and fruits to London in refrigerating chambers during the six months the Exhibition remains open.)—Tubers, potatoes, &c.; dry farinaceous vegetables, beans, lentiles, &c.; green vegetables for cooking, cabbages, &c.; vegetable roots: carrots, turnips, &c., vegetables used for flavouring, onions, garlic, &c.; salads, cucumbers, gourds, pumpkins, melons, &c.; vegetables, preserved by various processes; fresh fruit; dried and prepared fruits, prunes, raisins, figs &c.; fruits, preserved without sugar.

Class 55.—Condiments and Stimulants, Sugar, and Confectionery.—Table salt; vinegar; compound condiments and stimulants, mustard, &c.; chicory; sugar for household purposes, grape sugar, sugar of milk; confectionery, preserves, and jellies; fruits preserved in sugar or syrup; syrups and liqueurs.

Class 56.—Fermented Drinks.—Vin Ordinaire, red and white; sweet wines and still wines; sparkling wines; ale porter, cyder, perry, and other beverages from cereals; fermented drinks made from vegetable sap, from milk, and sweet substances of all kinds; brandies and alcohols; spirits; whisky, gin, rum, &c.

*Division H.—Horticulture.*

Class 57.—Conservatories and Horticultural Apparatus.—Conservatories and apparatus appertaining thereto; room and window

conservatories; fountains, and other means of ornamenting gardens.

Class 58.—Species of plants and examples of culture, exhibiting the characteristic tyres of gardens and dwellings.

Class 59.—Seeds and Saplings of Forest Trees.—Species of plants and specimens of products illustrating the processes followed for planting forests.

*Division I.—Mining Industries, Machinery and Products.*

Class 60.—Apparatus and Processes of the Art of Mining and Metallurgy.—Boring apparatus for artesian wells and wells of large diameters; boring machines and apparatus for breaking down coal and cutting rocks; models, plans, and views of the mode of working in mines and quarries; models of winding, pumping, and crushing machinery; safety cages and hooks; signals and other apparatus for lessening the danger in mines; ventilating apparatus; ventilators; smoke consuming apparatus; drawings of different classes of machinery used in mining.

Class 61.—Mining and Metallurgy.—Collections and specimens of rocks, minerals, ores, earths, and clays; various mineral products; raw sulphur; rock salt; salt from salt springs or lakes; mineral fuel, various kinds of coal, &c.; metals in a crude state, lead, gold, silver, zinc, antimony, &c.; alloys; electro metallurgy, objects gilt, silvered, or coated with copper, steel, nickel, &c., by the galvanic process; products of the working of metals, rough castings, bells, wrought-iron, iron for special purposes, &c.; manufactured metals, blacksmiths' work, wheels and tyres, unwelded pipes, chains, &c.; wire work and wire gauze; hardware, tinware, &c.; other metal manufactures.

## MODERN GOLD MINING, AND ITS FAILURES.

SIR,—During the last four years I have noticed that the number of failures show by far a greater proportion than in any similar period in the history of that industry. In many cases, failures (wholly or partly) have been attributed to the management, and I do not at all question the statement, that, in many cases, better could have been done in the working of the mines, and the reduction of the ores, &c. At the same time, it is only fair to state that, whatever improvement could have been made in the management of many of these bogus mines, nothing could save the very large majority of them succumbing to their fate. It seems rather striking to me that few have ventured to go back so far as to question the proceedings previous to the appointment of the practical manager. Were full investigations made, they would fully reveal the fact that, in most cases, the properties should never have been brought before the public in such a manner as to induce capitalists to entertain the idea that they were a sound investment, or even (in the majority of cases) that they were a fair speculation. The questionable proceedings in new districts bear a very striking contrast to the praiseworthy efforts put forth in most cases in old gold mining districts to show the properties to be valuable. I do not for a moment mean to say that old gold mining districts are free from trickery in all cases; but the percentage of these cases is so small in the old districts, that, when compared with that of the new, the comparison utterly fails. During my five year's mining in Australia, I very seldom came across a case where a mine was "salted" for sale, and, in fact, I seldom heard of such a thing being done. There were, however, a few cases in which storekeepers went to a new district where gold had been found, and, by a systematic course of puff, induced diggers from other places to come there to purchase the goods from their well-filled stores; but even these cases were very limited in number. On the whole, I think that 10 per cent. of bad cases is quite as much as could be reckoned on.

The case, however, is different in modern gold mining districts, for although the storekeeper does not fail to take an active part in puff with a view to increase his business (like the few Australian exceptions), he is nowhere in the grand systems of trickery adopted to demonstrate that the mines are capable of producing almost any quantity of exceedingly rich ore. Puffing is one thing, but trickery is another; the former can be guarded against by a mining engineer with a slight mental effort, but to guard against the latter when there are often so many natives present, watching every opportunity, is often no easy matter, more particularly as he has sometimes to correct people who apparently hold a high position, and under whose protection he is supposed to be in coming into an outlying district. People who come to guide and protect him are often those who seek to take undue advantage, either directly or indirectly, when he gets to the mines. This I have proved for myself in my inspections in new gold mining districts, and have had to take every precaution possible to guard against being imposed upon, so as to avoid the possibility of allowing investors to be swindled. I have also found this to be the case, principally where the mines and concessions had been previously inspected and reported on, as the following cases will show:—No. 1 case (reported to be a valuable concession for gold and diamonds) was a district that I could recommend for exploration and alluvial mining, but there was comparatively no mining done to show the place to be worth anything or nothing, and certainly it would not bear handicapping. No. 2 case was a mine that showed fair prospects, but was shown by previous report to be so extraordinarily rich as to be almost without a parallel, and requiring little or no capital. The two previous parties who inspected the mines had been tricked in their samples; in fact, one of them was tricked to such an extent, through the coating put on a large heap of poor stuff, that he reported it rich when it would not pay for reduction, and it is still there. In this mine, in addition to the coating of the heap, the trickery was done by the insertion of an undue proportion from a very small but rich leader. No. 3.—This mine was reported to be capable of giving 500*l.* per month profit through a native captain dabbling with the sample, and introducing some richer class of stuff in a very cunning way. Both this and No. 2 contain a large quantity of stuff that would pay with a good water stamps after canal is made to bring in the river water, but neither of them (with all their reported extraordinary riches) will pay cost with steam machinery, much less would they give dividends of 500*l.* and 2000*l.* per month respectively as reported. No. 4 had collapsed and was full of water and rubbish; therefore, instead of reporting it as such, the mining engineer reported it to be capable of giving dividends of over 2000*l.* per month. In fact, he paid a man to go there and select a sample from several tons of stuff at surface, and never went near the mine, having contented himself with being in the same locality, and inspecting Nos. 2 and 3, although No. 4 was only a few miles off. This was affirmed by the man who was paid for the sample in presence of myself and several witnesses. No. 5 was reported on to contain an almost unlimited quantity of stuff by a native engineer of high standing, and 4 ozs. to the ton was the reputed average. The parties guilty of the trickery here were the same who tried the game subsequently on me. One of them was part owner, and the other was promised the post of captain by him, provided they could succeed in selling. The one who was part owner having stated to the other that in the event of sale they should reserve such a share as to command a post for him. The average of my samples showed 4 dwts. to the ton. Here the modes adopted were various, the smartest being the introduction of fine gold in the cartridge with the dynamite, so that when the latter exploded it sent the fine gold along the cracked rock, facing it in many places with nice-looking specks of gold. The price of this mine was 110,000*l.* No. 6 was reported by its owners to have 80 lodes, and each worth 100,000*l.*, besides an extremely large quantity of undeveloped ground. In fact, this concession alone was reported to have riches enough to make the whole province a very distinguished one. Here a number of small pits had been sunk proving the presence of alluvial gold, which had been pretty well worked by the natives; but what were said to be lodes were merely quartz blows, none of them having been developed to show the existence of a lode. There are no doubt a few lodes in the concession, but the idea of valuing a concession in 180,000*l.*, where comparatively nothing had been done, is perfectly ridiculous, more particularly as no work could be commenced but that of prospecting. For prospecting and exploring I should have recommended it if it had not been handicapped, but mining is certainly a question of the future. The principal trick here was to take a piece of pointed steel and drive small pieces of gold into the holes in the quartz; the principal holes selected were those from whence grains of pyrites were decomposed, and some of them, the trapsters, showed considerable ingenuity. To give the details of all the trickery attempted would fill a small book; I have therefore only given you a few of the 1000 methods which I put to very severe tests, but I think they are enough to show that an engineer requires to be constantly on his guard, so that in the very beginning false estimates may not be made, and wrong conclusions come to, leading everybody subsequently astray. Several cases occurred in which it was attempted to show the value of the lode by taking away the poorer portion of it, and leaving the small productive leader standing; this, and the selecting of a spot in a large lode, where a productive leader drops into it and enriches it, are too manifest to every practical miner, and need not be commented on. Buying gold and bringing it from another locality is, I consider, one of the most shameful impositions that could be brought to the assistance of the tricksters. Seeing the vast amount of trickery resorted to, I think investors would do wise to explore for themselves, instead of purchasing mines and concessions, where there is always some one waiting to do such dirty work, to be subsequently shown a favour. I could mention other mines besides gold, where the trickery is carried out to suit the occasion, such as silver, tin, &c.—pardon me for saying tin, for the supposed tin mine (by vendors and their supporters, as well as by a great native engineer) was a vein of specular iron, and hematite. People who carry out their trickery successfully are the people who rejoice over their victims, and they are not discouraged even when they are discovered; as I heard a brave colonel in the army say, that he was not discouraged at my inspection of No. 6, although it was the 8th inspection; he knew of a concession which had been inspected 16 times and the trick done right at last; of course these words are not *verbatim*, but they could bear no other construction.

HENRY EDDY.

*Redruth, October 6.*

P.S.—I cannot too strongly advise capitalists who would invest in mining (in the absence of trustworthy evidence) to explore for themselves some of the many places deserving attention.

## A SLIGHT DIFFERENCE.

SIR,—In the report of the meeting of the Isle of Man Mining Company, on Tuesday, the 29th ult., I am made to say, "Our mines are second to none in the Isle of Man." This is a mistake, though not of the reporters. What I intended to be conveyed was that they were "second to none in the United Kingdom, either in production or importance." Kindly excuse me for thus troubling you.

JOHN BECKWITH, Chairman.

*7 and 8, Liver Chambers, 9, Tithebarn-street, Liverpool, October 7.*

## MINE LEASE REFORM.

SIR,—If there is to be legislation in the matter of mine leases let us have a Bill embracing the whole of the United Kingdom, and not confined—mainly, apparently, for electioneering purposes—to two counties, however much those two counties may contribute to our mineral wealth.

Mine proprietors in other parts of Great Britain have often much more reason to complain of mine leases than the employers of Cousin Jack in the West. In Wales, essentially a mining country, mines have actually been shut down because the great preservers of trout have discovered a certain amount of pollution in the streams used in the washing of the ores of these mines. Hundreds of miners must be turned out of employment rather than there should be a few dozen less trout in the rivers. The writer "could a tale unfold" about mine leases. He had a fair specimen before him the other day. The royalty to be so much, and if the price of ore exceeds a certain sum per ton to be so much per ton more, and if the price falls below a certain sum per ton is it to be so much less? The lease does not say. No road of any kind to be made without the lessors's consent, and then only on a site to be fixed on by the lessor. All surface damage to be paid for at so much per acre (a sum greatly exceeding the value of the land, *savant sans dire*). On the expiration of the lease no rubbish to be left inside the mines—everything to be in apple-pie order for the lessor or his nominee to drop in and reap the benefit of the adventurers' explorations and heavy expenditure. Do most landlords understand the meaning of the word adventurer? I trow it is a word not in their dictionary. They seem to think that by granting a lease at all, though on exorbitant terms, they are conferring a great benefit on the men who speculate, and who risk a great deal in searching for mineral beneath their soil. The landlord risks not one farthing, but peculiarly wideawake are landlords as a rule in the matter of dead rent and royalty. The writer has known an instance of a landlord having been paid almost treble the amount of dead rent for one year on royalty, although the mine was not paying cost, and yet, because it was paid at the end of the year, his agent has claimed the dead rent for the previous half-year. This was sharp practice, to do which most landlords or landlords' agents would blush, let us hope. There are landlords who are most generous in their dealings with mine proprietors and shareholders—the Prince of Wales is a noble example—all honour to such. There is need enough, on the whole, for reform in the matter of mine leases; but in the name of equity if there is to be reform at all, let it not be a hole-and-corner reform, but a national one, and embracing the leases of all and any mining district of the United Kingdom.—*North Wales, October 6.* ONE WHO NOTES.

## WHIN AND WHINSTONE.

SIR,—In reply to your correspondent's query of the 26th ult. allow me to say that the term "whin" is generic rather than specific, and in the North of England is applied to any unusually hard rock, whether it be stratified, and of purely sedimentary origin, or formed by volcanic or plutonic agency. For instance, in Cumberland the name "whintin" is given to a dark-coloured slate found at Skiddaw. Again, elsewhere the term "whinstone" is applied to a variety of basalt so-called, and is a general name for greenstone, and the harder trap rocks. It is also used synonimously with "whin." I do not know the district in which the whin mentioned by your correspondent occurs; but, judging from Mr. Robinson's letter last week, it is more likely to be an ordinary stratified sedimentary rock—probably very hard sandstone—than a greenstone or trap. Metalliferous veins are generally more or less pinched, and more or less barren in rocks of the latter type; for instance, in Derbyshire the lead veins are "squinted," and become very much impoverished when they pass into the toadstone, "a truly embedded rock, varying from soft crumbly ash to hard, closely-grained greenstone."—(Memoirs of the Geological Survey.) Indeed, for a long time it was thought the veins were quite cut off by this rock, although they were found again in a state of continuity below. Whitehurst was the first to correctly conjecture that the veins were thrown to one side by the toadstone, "so that they were ramified, and the ramifications were again united below the bed." This conjecture was practically confirmed by Barber, a pupil of Werner's, and a native of Bakewell, Derbyshire. White Watson (1797), says rake veins traverse toadstone, although there is seldom ore in it. The veins therein are generally small, chiefly of calcite, with asphaltum, with sometimes, galena and blende. In the limestone underneath they become as thick again, and frequently as rich as in the rock above. The limestone in contact with the toadstone is sometimes changed to a light green colour, and has a slatey texture, from the effects of intense heat under great pressure, and is often permeated with veins of iron pyrites and white calcite.—(Dr. Mantill.) When there is a fair proportion of galena in the vein through the toadstone, the veins in the limestone above or beneath, and sometimes in both, contain much ore.—(De la Beche.) In Cornwall and Devon greenstone is, on the whole, considered an unfavourable rock for lodes, but exceptions occur. In some cases copper lodes have been very profitable in greenstone, and manganese ores in East Cornwall and West Devon usually occur in proximity to masses of this rock. Whether the whin referred to by your correspondent be of sedimentary or of igneous origin can readily be known by an examination of its mineralogical structure, but as the rock crops out here and there in the neighbourhood, I would suggest a simple reference to the geological map of the district.

*Bala, North Wales.* E. HALSE, A.R.S.M.

## THE MOLESWORTH COPPER MINE.

SIR,—This little mine in St. Breock, near Wadebridge, is deserving of the attention of speculators, because the main lode yields copper ore of unusual richness, specimens of which may be seen in the office of Mr. Serpell, Lemon Bridge, Truro. An adit about 90 fms. in length has been driven on the lode by former workers, and it is said that ore has been sold from it in considerable quantity. It has been favourably reported on by Captain Josiah Thomas, of Dolcoath, Captain Teague, jun., and others, who deem it a very fair speculation. If such a lode were in the Camborne district the property would command attention and a good price.

*Truro, October 3.* R. SYMONS.

## POLLADRAS MINE.

SIR,—Of all the numerous abandoned mines in Cornwall, I do not know one more deserving of future development than that of Polladras Downs, in Breage. It was worked by the old Wheal Vor Company for about 10 years previous to about the year 1835, when it was stopped because tin ore was very low in price—about 35*l.* per ton; and the company had a very rich mine in Wheal Vor, and in other places adjacent. With the present price of tin, the returns would leave a good balance of profit, taking for a basis the returns made up to the time of cessation of works. There are 9 or 10 lodes in the sett, including, in depth, the productive lode called Trueman's, the top of which is in Trelawny's Land; but a large quantity of tinstone was raised therefrom by the Wheal Vor Company out of Polladras; which is the property of Mrs. Popham, widow of Mr. C. W. Popham. Five other lodes—Engine lode, Borr lode, Bissa lode, Wheal Gwens lode, &c.—yielded tin in abundance. A grant, or lease, can, I believe, be obtained on fair terms, and also of the contiguous lands of the Duke of Leeds. A pumping engine of 80-in cylinder, and a stamping engine of 36-in. cylinder, with the usual appliances would have to be provided. To keep the water from flowing from Wheal Vor into Trueman's lode a secure dam was constructed in the communicating cross-cut level, before Wheal Vor was stopped. Very few mines in the Breage district are now being wrought; but there are several well worthy of the attention of investors. Wheal Gwens and Wheal Singer are, I understand, to be effectively worked. I have not been in that locality lately, but I have been informed that at the former mine there is great activity in preparations for exploring the Gwens and other lodes in that sett, which is partly in Polladras and partly in Penhale. The indications in both these mines are said to be highly promising for tin. Mounts Bay Consols is said to be the like. The lodes there are very numerous and productive; but the operations are too limited for much success.

*Truro, October 5.* R. SYMONS.

## THE BETTWS-Y-COED LEAD MINES.

SIR,—The majority of mineowners and companies of this district appear to be prostrated by panic at the continued low prices of lead; they sit down and cry about foreign competition, &c., but what have they done to meet the new order of things, or how many among them could send lead to market at any price until they have first modernised, equipped, and developed their mines? They believe, and with good grounds for doing so, that their properties are rich in minerals, and as they can work extensively by deep adits, and with an abundant water power, why should they not compete with all comers? But amidst all this complaining and impotence, it is refreshing to observe the unflagging perseverance shown by Messrs. Watson Brothers and Co., on the northern flanks of the mountain (D'Eresby), where they have resolved to sink a pair of shafts into virgin ground, beneath the great ore deposits of a former generation, and there is every reason to believe that, in this new section of ground, they will be eminently successful. But there are several other equally interesting points in this little district (so old in its production of lead ores, and so young in its adoption of modern science for making it remunerative). On the southern slope of the mountains, and facing the beautiful valley of the Conway, the Griffin Company has languished for the past five years, without making any effort toward developing the numerous veins proved to be productive within their limits, although it would be difficult to find another property affording such abundant proofs of productiveness and ample facilities for cheap and effective working, the practical development of which would enable the owners to produce their lead and render it marketable at a cost of not exceeding 5*l.* per ton, leaving a wide margin for profits, and the repayment of money spent to capital account, while from the great extent of ground before them they would have work for generations.

In the western flank of the mountain the Coedmawr Pool Mine was successfully worked for a long period (probably 30 years) in rich courses of lead, which was found continuous from surface to the bottom of the mine (30 fms.) or about equal to 6 ft. in depth per annum for the life of the mine, but they were overpowered with water, and it was decided to bring a tunnel from the River Llugwy, which would drain the workings to varying depths of 60, 70, and 80 fms. This tunnel has been driven for something like two-thirds of the distance, the nonproductive measures have been passed through, and for the last 50 fms. joints and fissures containing lead ore in a very congenial stratum have been crossed, with strong indications of a powerful and open lode being in close proximity, the tapping of which will probably drain the old mine long before the tunnel comes under it, but the fear of hard times has stopped their drills for the present. Within the triangle formed by the three mines referred to, D'Eresby, Coedmawr, and Griffin there is a central group of young mines, occupying the highest part of the mountain, the surface scratchings of which have disclosed numerous productive veins, the continuations, in fact, of the chief lodes of the three mines already referred to, and all of which would be effectively drained to a depth of 150 fms. by continuing the Griffin and Coedmawr tunnels, and there are no adverse holders, or any existing circumstances or reasons why those two tunnels should not be united in the central ground in the ordinary course of mining, the result of which would be to render the mines almost as permanent as the mountain. For, although the district is not noted for the production of large ore deposits, the great number, the uniform character, and regular yield of the veins is a sufficient guarantee that by systematic working in the way indicated, this group of mines can at all times successfully and profitably compete with any foreign or other producers, and, therefore, if the discontented ones really wish the gods to help them, the sooner they put their shoulders to the wheel the better.

CHARLES KNEEBONE.

*Bettws-y-Coed, October 7.*

## LA PLATA MINING AND SMELTING COMPANY.

SIR,—Instead of declaring a dividend out of the borrowed money, on Monday, it surely would be a more business proceeding to carry on operations at the works until the 31st December, when, if the results are as satisfactory as they have been lately, a small dividend could be declared without adding to the debt already incurred by the company. Six months would thus be allowed to meet the next instalment of 5000*l.* debentures, with interest and bonuses.

*Alnwick, October 8.* A NORTHERN SHAREHOLDER.

SOCIETY OF ENGINEERS.—The opening meeting of the Session took place in the Westminster Town Hall, on Monday, Mr. Gandon (President) in the chair, the occasion being devoted to the reading of a paper "On Opening Bridges on the Furness Railway." The designer, Mr. C. T. Light, referred chiefly to the Bucclough and Ulverstone Bridges. The former carries the line across a waterway of 80 ft., between the Bucclough and Cavendish Docks, to the Dock Station. It is a double-leaf swing bridge, but its peculiarity is that between each leaf and the pivot on which it swings there is interposed a pair of spring girders, which support it freely when unloaded, but yield to the increased pressure of an advancing train, and allow the bridge then to rest on its bearings. The Ulverstone Canal Bridge is of an entirely different class. The span of the waterway is only 27 ft., but the conditions of the railway involve a skew of 48°. This difficulty is surmounted by making the traverse of the bridge at right angles to the canal instead of to the line, the bridge being constructed of a gridwork of girders resting on three lines of screw piles, the whole bridge drawing back by hydraulics into a pit on the rear end of the bridge. These modes of construction met with great appreciation in the discussion which followed the reading of the paper.

## MINING IN CHINA—THE KUANGTUNG MINES.

(From the Hongkong *Telegraph*, August 27th.)

Our readers will be pleased to learn that the mining industry in the Kuangtung province, commenced a few months back under the auspices and by the intelligent foresight and energy of our local Tribune of the Chinese, Mr. Ho Amei, is progressing most favourably. Everything tends to show that the enterprise which floated the Tam-chow Mining Company will soon reap a rich reward. Of course, operations are only yet in their initial stages, but prospecting by experts and the preliminary working that has already taken place, have produced results which are strongly indicative of a most prosperous future for the projectors and owners of mining industries in Kuangtung. We have seen a small button of silver, the product of an atsay of ore from No. 3 shaft of the Tam-chow Mine. As this ore produced 40½ per cent. of silver, and was in lumps of considerable size, it looks very much as if the operators had struck a big bonanza. And as such ore is estimated to be worth $14,000 per ton, it requires no great knowledge of figures to grasp readily enough the possible—nay, probable—value of this mine. Mr. Thomas E. Candler, the mining engineer and geologist of the Tam-chow Company, has lately made assays from specimens found in various districts of the adjoining province, and in most instances the results have been surprisingly good. From facts within our knowledge, and from recent prospecting by experts, there would certainly seem to be a great mining future before the southern provinces of China. Scientific observations of a recent date conclusively show that the country is thickly studded with valuable mineral deposits, which are only waiting to be properly developed. The Chinese Government has lately done its utmost to facilitate the good work now going on, and Mr. Ho Amei and his supporters frankly avow their indebtedness to His Excellency Chang Chih-tung, Viceroy of the Liang Kuang, for the hearty support he has given toward the worthy object of placing the mining industry on a recognised basis. To give an intelligent insight into the character of the Kuangtung mines, we cannot do better than publish the following report from the able pen of Mr. Thomas E. Candler, which is an exhaustive account of recent researches and experiments at Chung-fa:—

REPORT ON THE CHUNG-FA MINING PROPERTY, &c.

My examination of the Chung-fa property, from which I had some specimens given me some time ago, lead me to discover that the range of hills on which this property stands is a continuation of the White Cloud Mountains of Canton, and the centre of this range with its offshoots consist of granitic rocks, with immense amorphous masses of magnetic iron ore. Naturally, my first examination was directed to the reported rich deposits of silver ore, and a very careful examination was made by me of all such places. The results of my prospecting were that—

A.—In the bed of a small but rapid stream of water a small vein 6 in. wide, containing galena, was exposed at a height of 1100 ft., in a granite country. I fired a few shots to take specimens for assay, and to see if there was any likelihood of this being a continuous deposit, but from general appearances it is quite possible that it might turn out on further prospecting a mere "Gark vein," or surface fissure.

B.—Lower down the mountain, at an altitude of 850 ft., limestone beds rest on the granite, and in a bed of very pure alabaster was seen a string of galena 4 or 5 in. wide, which had been worked down 10 or 12 ft. These were the only deposits of the said silver that were visible, and the assays proved the ore to be argentiferous galena, with only a low percentage of silver.

The assays of ore from "A" gave:—

| | |
|---|---|
| Lead | 75 per cent. |
| Copper | 3 per cent. |

and 25 ozs. of silver to the ton of ore.

The assays of ore from "B" gave:—

| | |
|---|---|
| Lead | 81 per cent. |

and 12 ozs. of silver to the ton of ore.

Generally my views on this property are favourable for systematic prospecting, as the limestone is very encouraging for carrying large pockets of argentiferous lead ore, and at the contact of the granite and limestone in depth valuable deposits of ore might be looked for; but when I take into consideration the amount of work which might be required in the development of this property and the necessity of considerable preliminary prospecting, I can scarcely with the knowledge I possess of the distrust with which many of the Chinese look upon mining as a profitable undertaking, recommend such a property for immediate working, especially as from the many specimens I am continually receiving I am convinced many much better properties exist elsewhere. Appearances of lead ore, unless existing in well defined fissure lodes, are never to be trusted, especially in limestone country, as the limestone is so acted upon by the carbonic acid gas in the water, that caverns are continually being formed in which the lead accumulates, and these require careful prospecting before it would be wise for any mining engineer to advise a company to work them.

Reverting for a moment to the iron ore at Chung-fa, I cannot speak too highly of this deposit. The ore is the very best known to metallurgists, is easy of smelting, and exists in such large masses that millions of tons of ore could be worked by merely quarrying operations at a total cost of less than $1 per ton, delivered at the bottom of the hills. Limestone you have in abundance, and of excellent quality, and your only drawback is fuel, and when the Chinese Government, by the assistance of competent men, decide on developing their mineral riches, I have no doubt coal will also be discovered. A word in conclusion about the Tam Chow Mine. The discovery of a rich vein of silver at a depth of 180 ft. in No. 3 shaft will be a great satisfaction to yourself and those interested in the mine, and I would like to place on record for the satisfaction of those who look forward to returns from the mine on its initial stage, before it is possible to carry out the proper development of the workings, that our operations have now laid open ore which in all probability would pay all our previous expenditure, but which to work out would ruin the mine from, I trust, a future of many years. Personally, I could never consent to ruin a mine for the sake of earlier returns, but if we get the preliminary work in the form of shafts and levels developed, then we may look forward to returns, which year by year as our workings increase in depth will grow larger owing to the increased quantity of ore which I am convinced will be found in depth. To find ore carrying over 40 per cent. of silver, and also distinct films of native silver at such a shallow depth as 180 ft., as we have done, is not the good fortune of many mines, and you can look forward with confidence to your first mine turning out a great success. THOMAS E. CANDLER, M.E., F.G.S., M.I.M.M.E., &c.

*Canton, China, August 4.*

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CARDIFF STEAM COAL COLLIERIES COMPANY, (Limited).—Object, carry on business of colliery proprietors, coke and patent fuel manufacturers and miners, and construct and maintain any fuel works, water and gas works, reservoirs, and railways, calculated to advance the interests of the company, &c. Registered by Kerr and Lanham, 3, Church-rents, Chancery-lane. Capital 15,000*l.*, divided into 150 shares of 100*l.* each. The first subscribers are—W. T. Lewis, C.E., Aberdare, 10; T. Davies, shipbroker, Cardiff, 10; C. Landie, C.E., Cardiff, 10; A. T. Lucovich, merchant, Cardiff, 10; M. Kriegar, German Consul, Cardiff, 5; Robert Day contractor, Cardiff, 10, J. P. Ingledew, solicitor, Cardiff, 5. The number of directors to be not less than three nor more than seven. Qualification five shares. W. T. Lewis, T. Davies, C. Lundie, Robert Day, W. A. Coats, and J. Gunn to be the first directors. Remuneration of directors to be determined in general meeting.

CLEVELAND IRON.—The Cleveland ironmasters' returns for September, issued on Saturday night, showed favourably, there being a decrease of 781 tons in September. With one exception, there has been a large increase for every month of the year, 84,000 tons being added in nine months. The production of pig-iron, including 49,000 tons of hematite, was 4000 tons less than in August, being 202,000 tons. The stock of warrants increased 23,000 tons. The shipments were large—85,000 tons. The total stock of Cleveland iron is now 422,000 tons

# Trade Reports.

## CORNWALL.

*October* 8.—Steadiness and quiet are the general characteristics of mining affairs at the present time, and there are no very clear indications of any direction in which a change may come. The outlook continues favourable, however, and business is likely to be restricted by the absence of sellers in good mines until a definite change in the situation does take place.

By the lamentably sudden death of Mr. W. H. Martin, in his 59th year, Cornwall and Devon have lost one of the most prominent figures connected with the china-clay trade. Mr. Martin was the senior partner of the firm of Martin Brothers, of St. Austell and Plymouth; and it was under his personal direction that the Lee Moor Clayworks, near Plympton, became the largest in the kingdom, and a pattern of model management in every detail. Visitors were always welcomed there, and Mr. Martin was one of the most kind and painstaking of hosts to the scientific societies and others interested in china-clay working who came into the West. The Lee Moor Works will long remain the monument of his abilities and enterprise. Mr. Martin had a very pleasant residence at Lee Moor, where he spent the greater part of the year, and it was while he was at Lee Moor, on Monday last, that without any warning in the way of illness he dropped and died. He was a man of fine physique, energetic in all things, a magistrate, held in high respect by all, and as a staunch Conservative had been named as a possible candidate for the St. Austell district in opposition to Mr. Borlase.

There can be no question that the East Pool adventurers have every reason to congratulate themselves. A balance of profit of 8390*l.*, and a dividend of 25s. is excellent work even for that excellent mine. Moreover, there is not a weak point anywhere in the report, and the prospects seem even better than at any previous date. The aggregate value of the points reported is actually over 1100*l.* per fathom, while in the 200 west, on the caunter lode, the lode for its full width of 14 ft. is worth 190*l.* These are very remarkable figures, and the fact that the mine has so many paying points shows that it has a large reserve of what we may call staying power.

The decision of the adventurers, on the recommendation of the committee, to retain Capt. Bishop's services exclusively, and increase his salary accordingly, was a very wise one. Very few of our mine managers are at all over paid—if any—and the adventurers must either be content to have only a share of their services, or to increase their salaries to meet the difference. Wherever it can be done the latter is the wiser course to take, and is likely to prove to the mutual advantage. It was a pity there should have been a squabble with regard to the proposal to increase the salary of the underground agents. Shareholders are not bound to accept the views of a committee; but it is only due to a committee, as it is to a board of directors, that they should be consulted upon questions of management. A little more tact, and a little less feeling on both sides, would have been an advantage; but happily, "all's well that ends well."

No doubt it savours of a very sanguine frame of mind for any one at the present juncture to express an opinion favourable to copper prospects; but we cannot help thinking that there is something to come out of the development of electric lighting and telegraphy in the shape of increased demand for this metal. What we refer to more especially is the important fact lately proved by Mr. Preece—that copper wire is more effectual for telegraphic work than iron—that a copper wire one-fourth the thickness of the usual iron ones will do actually more work in increased speed, and is not more costly. Decreased weight is an important element also in favour of copper, and the chances are that the use of iron will be gradually abandoned.

The remarkable collection of Watt drawings and papers exhibited by the old firm at the recent Polytechnic Exhibition suggests the idea that some practical use should be made of it. The plans and letters embody a very interesting body of hitherto unpublished details concerning the early connection of the great engineer with the county, and placed in the right hands might be made to tell a most valuable story. By no one was the collection more minutely inspected than by Mr. Frank Michell, of Redruth, and it could be handled by nobody to more advantage. Mr. Richard Michell, grandfather of Mr. Frank Michell, was one of Watt's earliest associates in the county, and his papers remain in the hands of his descendants, and would afford important aid in filling up the narrative. We hope something may be done in this direction.

## NORTH AND SOUTH STAFFORDSHIRE.

*October* 8.—The Quarterly Meetings yesterday in Wolverhampton and to-day in Birmingham have been marked by a good deal of eagerness on the score of enquiries, but the actual business done has not been commensurate. Better reports than for a week or two were brought to the meetings by certain of the coal-owners. The best reports were presented by the Cannock Chase masters. These are much stiffer in their prices in consequence of the larger demand. They refuse, in the case of the best collieries, to make the earlier concessions of 6d. to 1s. per ton off the list prices, and an early official advance is now anticipated. At date the best concerns are firm at about 10s. to 11s. for best deep, 9s. for best shallow, 8s. 6d. for shallow one way, and 7s. 6d. for kibbles. Second-class collieries are not getting so good rates as these. Earl Dudley has this week reannounced his furnace coal at 9s. 6d., and forge at 8s. 6d. Pigs are redeclared by the all-mine Shropshire and Staffordshire makers at 55s. to 60s. for hot-blast sorts. Hematites from the West Coast are quoted 54s. for forge sorts. Derbyshire pigs are 40s. to 41s. per ton, delivered to works, and Staffordshire common pigs 32s. 6d. to 35s. Manufactured iron is reannounced at 8*l.* 2s. 6d. to 7*l.* 10s. for bars and other sorts in proportion. Staffordshire tin-plate makers state that their product is worth more than three months ago by 6d. to 1s. 6d. per box.

At several meetings of colliers which have this week been held in various localities in South Staffordshire, the following resolution has been passed:—"That this meeting hereby agrees to abide by the decision of the Nottingham Conference, and that an application be made to the employers through the representatives of the men, for an advance of 15 per cent. in wages." Colliery-owners here unite with those in some other parts of the kingdom in stating that such a movement at the present time is hardly better than Quixotic.

The North Staffordshire Coal and Iron Masters' Association held their quarterly meeting at Stock-on-Trent on Monday,—Mr. F. Wragg (President,) in the chair. It was reported that the sudden increase in the demand for iron which took place a month or five weeks ago had not been continued. Prices for pig and finished iron, as likewise for ironstone, were reported to be as low as they had been at any time during the year. In the coal trade the demand for best fuel for household purposes showed a little more animation, but the general demand for manufacturing requirements was without improvement. No transactions of especial importance were entered into at the meeting, operations being mostly postponed until the Wolverhampton and Birmingham meetings

## LANCASHIRE.

*October* 8.—Throughout the Iron Trade of this district a generally dull tone prevails, and the recent upward movement in prices seems now to have collapsed; but to some extent it has left makers in a stronger position than they were before, and although prices are not maintaining the advance, a tolerably firm basis has been given where previously there was a good deal of underselling to secure orders. For pig-iron there has been extremely little enquiry during the past week, and both for local and district brands prices have shown a tendency to give way about 6d. per ton upon the recent advanced rates, sellers in some cases being prepared to book orders at about 38s. 6d. to 39s., less 2½, delivered equal to Manchester, although 39s. to 39s. 6d. are still the average quoted rates. Outside brands are also rather easier to buy, and good foundry Middlesborough can be got readily at about 41s. net cash, delivered equal to Manchester. Hematites continue in very poor demand with makers accepting low offers to secure orders, and for good foundry qualities delivered 52s. 6d. less 2½ is the average quoted price. In finished iron there is a moderate business doing, and most of the forges are tolerably well supplied with work: makers, although in some instances 5*l.* 7s. 6d is still quoted for bars delivered into the Manchester district, are, however, unable to get more than the old rates of 5*l.* 5s., but at this figure they are very firm. Nut and bolt makers complain of trade as extremely quiet, and the competition for orders is so keen that the Association list rates have practically been abandoned. Amongst engineers the condition of trade if anything gets worse; the large heavy engineering works are very slack, locomotive builders are moderately employed, but working off old orders that are not being replaced, and the same may be said of the leading boiler makers and machinists. Some of the special toolmakers are busy, but in the general run of tools there is very little doing, and the prospects for the future are very poor with the number of unemployed men increasing.

In the Coal Trade a fair business is being done in house fire qualities at about 6d. above last month's rates, but other sorts continue very depressed and extremely low in price. Even for house-fire coals, although the orders now coming to hand are sufficient to keep the pits going about five days a-week, there is no pressure considering the time of the year, and the advance in prices announced at the commencement of the month has not been fully maintained, one of the large Manchester firms not having followed the advance at all. At the pit mouth best Wigan Arley averages 9s., second qualities and Pemberton Four-feet, 7s. 6d., and common house-fire coals, about 6s. 6d. per ton. Both steam and forge coals and engine classes of fuel continue a drug in the market, owing to the general depressed state of trade and the continued strike at the Lancashire cotton-mills, which is throwing so much slack upon the market that in many cases colliery proprietors are prepared to take almost any price to move away stocks. Common coal for steam and forge purposes does not average more than 5s. 6d. per ton at the pit mouth, burgy, 4s. 6d. to 4s. 9d., good slack, 3s. 6d. to 3s. 9d., with ordinary sorts to be got from 2s. 6d. upwards.

For shipment there has been a fairly good demand, with rather better prices being got; but steam coal delivered either at the High Level, Liverpool, or Garston Docks, can still be readily bought at about 7s. per ton.

The miners' agitation for an advance of wages is meeting with no success. The Ashton and Oldham Coalowners' Association, at a special meeting, held on Tuesday, declined to entertain the request for an advance of 15 per cent., and similar replies are being given by the colliery proprietors in South-West Lancashire to the deputation of men waiting upon them this week.

## DERBYSHIRE AND YORKSHIRE.

*October* 8.—The question of the 15 per cent. advance on miners' wages appears to make little progress, but there is not much heart in the manner of the men in asking for it. It is looked upon as a forlorn hope, but the men have to obey orders from those they pay, and ask for what they know, under no circumstances, will be granted. On what ground such a heavy demand has been made is not stated by the applicants. It cannot be in consequence of a corresponding advance in the price of coal, for that is entirely out of the question. It was recently stated that the colliery-owners in some districts had raised the price of coal 1s. per ton; but this could only apply to household qualities sent to order. As we have before pointed out, house coal cannot be raised in the London market when sold to merchants, seeing that it is disposed of by agents, who realise as much as they can for it. Steam coal, next in importance to the "softs," is in less request in winter than it is in summer, and has to be sold for less money. Small coal, too, has to be sold for less than it costs the mineowner; such being the case to ask for more wages because there is more doing in one description of coal than there was a short time since is simply a step towards stopping trade in every direction. During the whole of the past summer the owners of coal mines had a very hard time of it, and now that they are able to carry on without incurring any loss the men seek to have a great deal more than the increase of profit that is realised, although work was carried on for months for their sole advantage. Next week there is to be another conference, when the answers to the applications made for an advance will be given in and considered, as well as the question of limiting the output of coal. The result may be easily anticipated—there will be no advance of wages, nor will there be any limitation of the production of coal.

The collieries in Derbyshire and the adjoining county have worked well of late, so that the men being able in most instances to work the whole of the week are in a much better position than for some months past. They are therefore not likely to be satisfied with what they can earn in four days when they have the chance of being paid for six. House coal of course is now in more request, and heavy trains are daily sent from the Derbyshire pits to the Metropolis, for large consumers have of late bought most freely. The late advance on the part of merchants has been maintained, but few colliery-owners have anything to do with fixing the price of coal in the London market, but it may be said that there are more of them now selling direct to consumers than was the case a few years ago. Amongst those who have helped to break down the monopoly of the merchants is the Marquis of Londonderry, and his example is now being followed by others. When the colliery proprietors are in a position to fix the prices it will be so much the better for the Metropolitan consumers, who have for generations been at the mercy of the merchants. At the present time the Pinxton Company, who have a large concern in Derbyshire, are doing a considerable trade in London, which they appear to have got together by selling from 1s. 6d. to 2s. below the merchants' charges, and there is every reason to believe that in so doing they have made some little profit. Steam coal has gone off moderately well from the Derbyshire collieries, considering that the owners are not in a position to export any great quantity of it. It is different in the South Yorkshire district from which the Humber is at a convenient distance. Of late a fair tonnage of steam coal has gone to Hull for shipment to Copenhagen and the Russian Baltic ports, but these are not likely to be open much longer owing to the ice. Engine coal has not of late gone off so well, especially into the Lancashire manufacturing districts in which appears

strikes and disputes have interfered with the production of cotton goods. South Yorkshire coke has continued in steady request for several iron-making districts, and great care being taken in selecting, washing, and grinding of the raw material, it now competes with that made in Durham, large quantities being sent into Lincolnshire, Derbyshire, and Northamptonshire. It varies in price a good deal, selling from 8s. 6d. to 12s. per ton.

Pig-iron is not in quite such good request as it was a short time since, so far as the Derbyshire furnaces are concerned, but price have kept up very well. At the works in the neighbourhood of Sheffield makers of pig have done well of late, selling at fully recent rates, and declining to contract for future deliveries at the existing prices. Beyond Parkgate to the North very little pig is now made, Milton and Elsecar being complete wrecks, and there does not appear to be much likelihood of either the blast-furnaces or the forges that not so very long since found profitable employment for an army of workpeople being again in operation. At the Thorncliffe works Messrs. Newton Chambers and Co. are doing a steady trade in gas material, stoves, and other specialities, for which this old established and well-known firm are noted.

The improvement previously alluded to as regards the leading Sheffield industries so far has been well maintained, and the workmen generally better employed than for months past. Bessemer steel is required in larger quantities for various purposes, a good deal being taken for rails for which some large orders are in hand principally for exportation to Australia and South America. Tyres, axles, railway wheels, springs, and steel mining tools are in better demand than what they were, and there is also more doing in ordinary axles and wheels for Spain and the Brazils. Table and pocket knives of the best and secondary qualities have met with a better enquiry, as have edge tools as well, but a good deal more could be done in these branches were there a greater demand. In the heavy departments work appears to be more plentiful all round, The heavy plate branch continues brisk, as has been the case during the year so far, and there has also been an increased output of ordinary plates, sheets, and angles. Hoop-iron has gone off very well of late, mostly for exportation, and increased activity has prevailed in the production of heavy tools for machines worked by power. Cast-steel wheels have been in steady request, as well as those that are forged at the leading works, and which appear to be steadily advancing in the estimation of mineowners and others. No change has taken place with respect to the business doing at the engine-works and machine-shops, which is still of a somewhat moderate character. At the foundries there has been a fair output of pipes and builders' castings, with the exception that there is not quite so much doing in stove grates. The railway wagon builders are not so busy as they were, and are working out old orders.

## SOUTH WALES.

*October* 8.—The Steam Coal Trade is assuming a healthier appearance. The amount sent away from Cardiff last week was 128,034 tons, being 20,000 tons more than in the previous week. Newport, 28,323 tons foreign, and about 19,000 coastwise; Swansea, 20,661 tons, and about 13,000 coastwise, with 3370 tons patent fuel. House coal, as usual with the advent of cold weather, is in better demand. Prices are quoted at from 8s. 3d. to 8s. 9d. Notices have been given at Dowlais and Cyfarthfa to terminate contracts in a month. The object of these notices is to reduce wages at the end of that period. It is reported that all the other steel and iron works in South Wales and Monmouthshire will follow suit. About 4000 men will be affected by this arrangement at Dowlais alone, and about 2000 at Cyfarthfa. The notices, however, will not affect the collieries connected with these undertakings, which will continue working on as heretofore.

In the Forest of Dean the colliers have rejected the proposition of the Manchester Conference to give notice for an advance of 15 per cent.

At the meeting of tin-plate manufacturers, held last Saturday at Swansea, it was resolved not only to continue the present agreement to stop the works one week in every four, which agreement terminates on December 31 next, but to stop the works one week in six in the first six months of 1886. It was also resolved to present Mr. Spence with a testimonial of the value of nearly 1000 guineas for the tact and energy he has displayed on bringing about the arrangement, which is having a most successful result. The tin-plate trade is very firm in tins, and prices are tending upwards. Orders are now plentiful, but manufacturers are advised not to be too exacting in the hour of victory.

## TYNE AND WEAR.

*October* 8.—There is little new to report in connection with the coal and coke trades, the demand for some classes of coal is certainly improving, but this is merely due to the advance of the winter season, which brings an increased demand for house and gas coal. Recent contracts for gas coals are likely to put them on a stronger basis. Contracts are now being negociated at old rates. The best qualities of large steam coals are still going off pretty well, but medium and second-class coals are only in moderate request even at the present moderate prices, which are very favourable for shippers. East and West Indian orders are expected here shortly, and it is expected that those orders will put new vigour in this district. The coke trade continues extremely dull on the whole. A few small contracts for the best kinds of coke have been made for oversea shipments, but there is nothing to cause a hopeful prospect. The depression in the coke trade in North-West Durham, which we have noticed of late, has led to notices being given to a considerable number of men to terminate their engagements at the Mickley Collieries, and also at the Lentz Collieries. The shipments of coals and coke at Tyne Dock for the week amounted to 114,518 tons, an increase of 4326 tons over the corresponding week of last year. The imports were also large, and of a miscellaneous kind. The inauguration of the fifteenth session of the Durham College of Science took place in the Wood Memorial Hall, Newcastle, on Monday. Professor J. H. Merevale read the inaugural address, which is of course a long paper; we only comment on some parts here. He very properly advocates more complete technical education for mining and other engineers; but he, according to our views, goes too far in assuming a great superiority in scientific knowledge to foreign engineers as compared with those of this district. He very properly says that, "until within the last few years, the produce of coal in this county was greater than that of the whole world beside, and also that every important advance in coal mining emanated here. The pumping engine, the iron tramway, the locomotive tubbing the water back in shafts, splitting the air currents; the safety-lamp, improved cages with guides in the shafts, were all first introduced in England." Well, we have here a grand list of achievements, and we shall see what he has to set aginst them which have emanated from abroad. He proceeds:—"With but few exceptions, all recent improvements have come from abroad. Wire winding ropes, the Chaudron method of sinking, the Pertsch method of sinking, the diamond drill, and transmission of power by compressed air, the ventilating fan, are all of foreign origin." Now, in the first place, he is, we are confident, entirely in error in ascribing the invention of wire winding ropes to foreigners. The first winding ropes of this kind introduced here was the invention of Mr. R. S. Newall, of the Teams Works, Gateshead. His invention was patented, and the ropes introduced at the collieries here about the year 1848 (we have not the exact date), or about that period, and they have since been extensively employed in this and other countries; the firm were also about the first in the field with telegraph cables, and they still occupy a high position in the manufacture of all kinds of iron wire and steel ropes and cables. With respect to the introduction of the apparatus for transmitting compressed air, we do not think that this is of foreign origin, but we may be mistaken on this point. The most important machine introduced from abroad is the Guibal fan, the invention of a Belgian engineer; this machine has been introduced at a great number of collieries in this country, and it has proved of great service, but it is likely that this machine will now be superseded by improved ventilation, of which there are a number. The Guibal fan is now condemned by some engineers, on account of the frequent repairs it requires, while they state that other fans quite as effective as the Guibal require very little in the way of repairs.

The Pig-Iron Trade has been very quiet this week, and there has been a marked inactivity and lack of tone. The dull state of the Scotch iron trade of late has had a bad effect upon the Cleveland trade. The foreign demand has been very quiet, with the exception of Germany, a large quantity having been sent to that country. The delivery for September is usually large, hence it is no matter for surprise to find that the 85,000 tons sent away for the month represents a larger total than for any previous month of the year. The quotations are little changed. Merchants quote for No. 3 32s. 6d., warrants are 33s. 6d., makers ask higher prices than merchants. There is no improvement here in the rates for finished iron, which causes some surprise, as the rise in finished iron of most kinds at Wolverhampton and the Midlands generally appears to be considerable and well maintained. It must be noted, however, that there is an increased effort made to push into branches of more general work and smaller work, such as has been chiefly done in the Midland district, and it is expected that this will be ultimately accomplished. In the plate, angle, and bar trades there is no improved demand, but there is an improved demand for railway materials and rolling stock. It is understood that the North-Eastern Railway Company has given out orders for 20,000 tons of steel rails, the orders having been given to Bolckow and Vaughan, on the Tees, and other firms at Darlington and the district.

The North-East Coast Institution of Engineers and Shipbuilders have issued the first volume of their Transactions, and the contents of the volume fully confirm the anticipations of the value and importance of this Institution. In addition to the inaugural address the volume contains six papers of value, discussions thereon, and communications. The subjects dealt with include—"Triple Expansion Engines," "Twisting Moments on Crank Shafts," "Curves of Stability," "Boiler Construction," &c., all matters of great technical interest. As we have often noticed in this letter, the greatest improvements in steam engines and boilers of late years have been made in marine work, and the compound surface condensing engine effected very important improvements in the working of their engine, and also a great reduction in the consumption of fuel per horse power per hour, so much so that it was considered by many that the marine engine had reached almost the utmost limit of improvement, but many now believe that the triple expansion engine and quadruple expansion engines have effected another great advance. Mr. Alexander Taylor deals with "Triple Expansion Engines," and tells us that in one instance carefully noted there was a saving of over 17 per cent. in the consumption of coal by the use of these engines. If only half such a saving can be effected an enormous advantage will be gained. The prolongation of the life of our coal fields is, of course, connected with these questions. The discussions take place in the technical school or institute just as the experiments have previously been made in the laboratory or workshop, when the crude ideas are subjected to the criticism of the expert, and thus it is that they are worked into such perfection which makes them of value to the trades, to the locality, and to the world.

## COMMERCIAL FAILURES.

The number of failures in England and Wales gazetted during the week ending Saturday, October 3rd, was 84. The number in the corresponding week of last year was 58, showing an increase of 26, being a net increase in 1885, to date, of 568.

The failures were distributed amongst the following trades, and, for comparison, we give the number in each in the corresponding weeks in 1883 and 1884:—

| | 1885. | 1884. | 1883. |
|---|---|---|---|
| Building trades | 12 | 7 | 17 |
| Chemists and druggists | — | — | — |
| Coal and mining trades | 3 | — | 2 |
| Corn, cattle, and seed trades | — | 2 | — |
| Drapery, silk, and woollen trades. | 6 | 5 | 11 |
| Earthenware trades | 1 | — | 1 |
| Farmers | 9 | 5 | 7 |
| Furniture and upholstery trades | 3 | 1 | 2 |
| Grocery and provision trades | 16 | 8 | 34 |
| Hardware and metal trades | 1 | 2 | 4 |
| Iron and steel trades | 3 | 4 | 2 |
| Jewellery and fancy trades | 2 | 2 | 7 |
| Leather and conch trades | 7 | 4 | 10 |
| Merchants, brokers, and agents | 5 | 2 | 13 |
| Printing and stationery trades | — | 2 | 1 |
| Wine, spirit, and beer trades | 7 | 6 | 9 |
| Miscellaneous | 9 | 8 | 20 |
| Totals for England and Wales. | 84 | 58 | 140 |
| Scotland | 20 | 19 | 25 |
| Ireland | 5 | 3 | 3 |
| Totals for United Kingdom | 109 | 80 | 168 |

The number of Bills of Sale published in England and Wales for the week ending October 3 was 277. The number in the corresponding week of last year was 208, showing an increase of 69, being a net increase in 1885, to date, of 567. The number published in Ireland for the same week was 13. The number in the corresponding week of last year was 17, showing a decrease of 4, being a net increase in 1885, to date, of 31.—*Kemp's Mercantile Gazette.*

Distinguished Honour to a Cornishman.—On leaving Venezuela for England, Mr. John Provis, M.E., late resident superintendant of the New Potosi Company, (Limited), was presented with the order of "Busto del Libertador" by the President of the Republic. On the diploma, which accompanies the decoration of the order, it is stated that it is the most distinguished mark of honour the Venzuelan Government can confirm on a foreign resident or citizen. In an official report of the Federal Territory of Yruari, recently published by the Venzuelan Government, reference was made in the most eulogistic terms to the service rendered by Mr. Provis for the progress and development of the country, and more especially as president of the committee for improving internal communication, during which period all the main roads were repaired with the assistance of the Government, the New Potosi Company, and New Chili Company, and a bridge was designed and constructed by Mr. Provis over one of the worst creeks between the River Orinoco and the mines. This bridge, which was opened by the Governor of the territory, has proved of the greatest utility to both the English companies mentioned.

# Meetings of Public Companies.

## EAST POOL.

On Monday the ordinary 12-weekly meeting was held,—Mr. G. A. Michell presiding.

The Purser (Major Haye), presented the accounts. There had been sold 354 tons 15 cwts. 2 qrs. 7 lbs. of tin. This, at an average price of 49*l.* 7s. 3d., had realised 17,512*l.* 2s. 5d. (Applause.) Tin elvans had brought 175*l.* 10s. 4d.; copper, 192*l.* 15s. 6d.; wolfram, 90*3l.* 2s. 10d.; arsenic, 57*2l.* 3s. 11d. The total credits, with other items, were 19,484*l.* 7s. 1d. Taking the opposite side labour costs were 6538*l.* 13s. 1d.; merchants' bills for June, July, and August are 3087*l.* 7s. 3d.; Stannary assessment, 24*l.* 3s. 5d.; contribution to Carn Brea water charges, 50*l.*; highway rates, 300*l.*; and dues to Mr. G. L. Basset, 1093*l.* 3s. 6d., a balance of profit being left of 8390*l.* 14s. 11d. The committee, said the purser, recommended a dividend of 25s. per share. That would absorb 8000*l.*, and the balance of 390*l.* 14s. 11d. would increase their reserve fund to 2082*l.* 3s. 3d. (Applause.) So far as the accounts were concerned they had charged up every penny; in fact, they had gone beyond that, inasmuch as they charged 300*l.* in rates before they were due, because Capt. Bishop was about to incur some extra expense in connection with the stamps axles. (Applause.) These rates would not be paid for a fortnight. This money had been charged as they had felt their costs next time might otherwise be a little heavier. (Hear, hear.)

The report of the agents (Capts. Charles F. Bishop, James Penhale, and Samuel Curtis) stated:—Great Lode: The engine-shaft is down 3 fms. below the 228. The 228 west is worth 20*l.* per fathom; the 212 west 20*l.* per fathom; the 200 west 13*l.* per fathom, and four stopes in the level of an average of 20*l.* each; the 200, east from the cross-cut, 25*l.* per fathom; the 190 west 15*l.* per fathom, and three stopes in the level each averaging 20*l.* per fathom; the 190 west on the south part 16*l.* per fathom, and one stope in the same level of equal value; the 180 west 10*l.* per fathom, and two stopes in the same level each 16*l.* per fathom; the 170 west 8*l.* per fathom, and a stope in the same level 16*l.* per fathom; the 160 west 18*l.*, and one stope 12*l.*; the 150 west 18*l.*, and a stope 45*l.*; the 140 east from rise 50*l.*, and a stope in the level 40*l.*—Flat Lode: The 180 east 12*l.*, and the 180 west 12*l.* per fathom; the 170 east 24*l.*, and two stopes each averaging 16*l.*; the 160 east 10*l.*, and a stope of the same value.—South Lode: The 212 west on the caunter worth 20*l.* per fathom; the 200 west on the caunter of the value, fully, of 80*l.* per cubic fathom. The lode at present is about 14 ft. wide, therefore the lode for the whole width was 190*l.* per fathom. The winze in this level was communicated with the 212. The 190 west worth 15*l.* per fathom, and three stopes each averaging 20*l.*; the 180 east 8*l.*, and one stope 12*l.*; the 180 west 20*l.*, a winze in the level 20*l.*, and three stopes in the level each of 15*l.* per fathom; the 170 west 20*l.*, and three stopes in the level each averaging 15*l.*; the 170, east of cross-cut, 10*l.*; in the 160 a stope worth 20*l.* per fathom; and the 180 east on the engine lode worth 12*l.* per fathom.—Michell's Shaft: This shaft is being sunk by nine men, and now down 4 fms. below the 60 fm. level.

The Purser: You will find that as good a report as you have had for some time, and if you wish any further information I have no doubt Captain Bishop will give it to you, and before we go on with any more business.

Capt. Bishop: Mr. Chairman, perhaps it might be wise to supplement the report with two or three remarks respecting the 200 west on the caunter lode. You will see we have valued the lode at 80*l.* per cubic fathom; the whole width being 14 ft., we have called its value 190*l.* per fathom. That is a very high valuation, gentlemen, but I think it can be substantiated when I give you the following:—I find by going through the books this morning that 179 tons of stuff equalled 21 tons 9 cwts. 3 qrs. 27 lbs. of tin; in other words, for that, which would be about 5 or 6 fms. driving—for the whole width of the lode—the average produce is 2 cwts. 1 qr. 17 lbs. to the ton of stuff. (Applause.) So that you can very clearly see we are well within the mark. (Hear, hear.) I may say further that the winze reported worth 40*l.* per fathom in the bottom of the 190 was a little way in advance of the 200 end, and the winze in the last day or two has wonderfully improved. It looks as though we shall very soon come down on that bunch of tin we had in the end. The lode in the winze is not carrying more than a cubic fathom of ground.

Mr. Woolcock: How far down is the winze?——Capt. Bishop: About 5 fms. out of the 11½, very likely.

Mr. Milford Cock: The bottom of the mine has fallen off a little. Can that be accounted for?

Captain Bishop: You mean the 228. You must remember that since the last meeting we have driven but very little there, in consequence of putting up a rise with the boring-machine, and at the same time sinking a winze from the bottom of the 212. That being communicated we have resumed driving that level, the lode in which has held good up to within 10 or 12 ft. of the present end, just at the same valuation as at the last account—30*l.* per fathom. We then met with a poor patch of ground, and the end fell off about one-half of the valuation. But within the last 3 ft. the end has wonderfully improved, and in a short time we think it will resume its former value, if not more. You must remember we have not driven many fathoms since the last account. We had to put 15 fms. through the winze. The bad patch we had in the 212 is just the same as was met with at the 228.

Mr. Woolcock: On the caunter lode how far have you driven? You have driven out a cross-cut at the 212. How far west of the cross-cut, and what is the character of that lode as compared with the lode above?

Captain Bishop: The whole length of the cross-cut is about 30 fms. south of the engine-shaft. We have turned around on the lode about 3 fms., and the lode when we cut it was very similar to what it was just above that place, but the lode has wonderfully improved during the past few feet, and we consider that when we get further west we shall have a better lode. It is a beautiful lode for 8 ft. wide. The winze coming down had an underlie a little more at point than usual. I may say that 8 fms. out of the 11 or 12 fms. were much better than now. In 2 or 3 fms. going west we shall have a good lode. We have a beautiful junction of the caunter and engine lodes. That junction met in the 200, and produced that rich lode there now. I consider that, on the whole, the lode is looking much better at the 212 than at the 200. (Hear, hear).

The Chairman proposed that the accounts be adopted, and that the recommendation of the committee that a dividend of 25*s.* per share be declared be agreed to.——Mr. Arthur Fox (Penzance) seconded, and the motion was passed.

The Purser said the committee having felt that in the interests of the mine Capt. Bishop should devote the whole of his time to their property, and having regard to the fact that Capt. Bishop was willing to continue his services wholly, the committee suggested his salary be increased 2*l.* 2*s.* per month, and that he have a gratuity of 20*l.* to defray his expenses in going to the Inventories. (Hear, hear.) The increase would bring Capt. Bishop's salary to 300*l.* per annum.

Mr. John R. Bramwell moved that the recommendation be agreed to. It was a source of great gratification to him to move that resolution. He recognised in Captain Bishop a very able manager of that mine. That being the case, they felt it was their duty to encourage him, and in proposing that resolution the committee thought they did no more than bare justice to Captain Bishop. (Applause.)

Mr. Henry Rogers (Helston) seconded, remarking that were the recommendation larger he should gladly support it.

The Purser said he believed it would give all great pleasure to make the increase, which had been well earned. (Hear, hear.)

The motion was adopted, and

Captain Bishop, in thanking the meeting, said the act came upon him as a surprise. He did ask the other day to go up into the eastern part of the county to inspect a mine, but the committee said "No." He wrote Mr. Dennis, of Liverpool, the largest shareholder, and he said, "No; I hope you will not ask me any more."

Mr. WOOLCOCK proposed a vote of thanks to the committee, manager, and agents for the very able and sufficient way in which they had carried out the affairs of that mine. (Hear, hear.) They knew an important concern such as that was required a great deal of care and attention, and that care and attention were given by the executive and agents.

Mr. FOX, as an old shareholder, seconded the motion, which, having been agreed to,

Mr. HENRY ROGERS said he gathered from the feeling of the gentlemen at his end of the room that it would be only grateful and graceful on their part if, while they offered Captain Bishop an increse of 2*l*. 2s. per month they offered the underground agents an increase of 1*l*. 1s. per month each. (Hear, hear.) Personally he made that proposition with very great pleasure.

Mr. HOSKING (Redruth) seconded, remarking that in Captain Penhale and Captain Curtis they had two as good underground agents as the county could produce. (Hear, hear.)

Mr. JOHN BRANWELL: We all recognise the ability of our agents, but I do not think it is quite regular in Mr. Rogers appearing here to-day, and taking the business out of the hands of the committee. If it is to be a committee of the whole house I should like it said so; if the committee is to manage this mine I should like it said so. We have done this in regard to Captain Bishop after due deliberation. You cannot know what our idea is the future is in respect of the other agents. I hope Mr. Rogers will see it is the duty of the executive to initiate such matters in regard to the management of this mine as may be deemed best. I think if we are to lay down this as a precedent, for any individual shareholder to get up with a good dividend—at the time of election—we may be landed in some difficulty so far as the management of the mine is concerned. I do not think it is regular, or in due form to have matters of this kind initiated outside the committee.

The PURSER thought he might say that the matter had been talked of, and that no doubt something would be done, and the CHAIRMAN also felt the committee should first consider the matter.

Mr. ROGERS was opposed to anything of the sort. He believed in their judgment and discretion, but he was one of those who believed the committee were not infallible. He considered his own proposition reasonable, honest, and proper in every respect. He certainly was not disposed to waive the right of putting the motion to the meeting.

Mr. BRANWELL believed if Mr. Rogers put the matter in a different form the committee might take it into consideration at the next account. But if Mr. Rogers should assume it was right and proper to make and carry a motion of that kind without any deliberation, then he should beg to resign his appointment. He certainly should not be a party to motions made without the due deliberation of the committee. The agents knew his feelings in respect of them, and he took exception to the resolution simply as a matter of business, and Mr. Rogers knew it was not business without presenting the question to the committee in the first place.

Mr. HOSKING: I think it was not done in any hostile spirit.

The PURSER said they must consult the people in Liverpool first, and, perhaps, at another meeting they would know the result.

Mr. WOOLCOCK: Would it not be wise for Mr. Rogers to withdraw for the time, and leave it in the hands of the committee for the next meeting?——Mr. ROGERS: I cannot consent to adopt the suggestion. I think any shareholder has a right to make a reasonable proposition. All I can say is, unless the proposition is entertained, I certainly shall not attend the meeting again, whether Mr. Branwell resigns or not. We are met here to make suggestions. Proceeding, Mr. Rogers repeated that he had the greatest possible respect for the committee. If he had known it was the usual practice, and perfectly essential, matters be first discussed in the committee-room, he might possibly have yielded. But it was most unkind and most ungrateful to leave the matter open. Suppose they left it with the committee, and the committee were to decide against them? Was not the impression likely to have produced an unfavourable one on the part of the shareholders that the energies of the agents should be damped in the future? If his suggestions were acquiesced in but little additional money would be spent.

Mr. BRANWELL quite agreed with the way in which Mr. Rogers put the case—that the committee might, or might not, agree to the suggestion. Certainly one or two things must arise, but who was there so likely to know the value of the suggestion as the committee? And were they to have motions from outside shareholders carried in the teeth of the committee without any deliberation? That was not the way in which things were managed in that mine. The affairs of that mine were managed in a business-like form. Their accounts were in a business-like shape, and notwithstanding what Mr. Rogers said, he believed the sub-agents were perfectly of his opinion that the proposition should not be carried. He thought if the matter was put in the form of a recommendation it would be quite right and proper. (Applause.)

The PURSER did not hesitate to say that the Chairman had, before that meeting, said in his opinion the salaries of the sub-agents should be raised, and he (Major Haye) was to have written Mr. Dennis on the subject, but there had really been hardly time. Even Capt. Bishop's case had but very recently been arranged.

Mr. ROGERS: You mean that Mr. Dennis is to be communicated with?——The PURSER replied in the affirmative.

Mr. ROGERS remarked that he would, therefore, submit that the meeting thought it desirable that the under-agents should receive a guinea monthly extra, and that Mr. Dennis be consulted on the subject.

Mr. BRANWELL: Will you say that the committee be consulted?——Mr. ROGERS explained he meant that the committee confer with Mr. Dennis.

Mr. BRANWELL accepted, and the motion was agreed to.

The CHAIRMAN, replying to the vote of thanks to the committee, said he personally did all he could. They had done their best, and they should continue to do so.

Captain BISHOP, acknowledging the vote, said he was sure the agents were thankful to the meeting. If he were to go to any part of the habitable globe he would not wish for two better men than he had in Capt. Penhale and Capt. Curtis, and he was sure they would be duly appreciated. It was, therefore, their pleasure to meet them under such favourable circumstances as that day. And so long as they remained there they should continue to do their best. (Applause.)

The PURSER having responded the proceedings terminated.

## NEW LANGFORD MINE.

The four-monthly meeting of shareholders was held at the offices of the company, Gracechurch-street, on Thursday,

Mr. J. Y. WATSON in the chair.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting.

The accounts showed a balance of liabilities over assets of 259*l*. 17s. 3d.

The CHAIRMAN said: Gentlemen, since the last meeting held in May operations under the advice of Capt. Gregory have been confined to driving two ends containing low priced silver ores into new and whole ground; several tons of these ores as well as blende have been raised, but the former are of little value at present. Under the heavy relinquishments of shares that have taken place, the committee have felt it incumbent upon them to keep the costs as low as possible, consistent with the prospects for finding silver. The five months' accounts we have now to present show a balance of liabilities over assets of 259*l*. 17s. 3d., but nearly 200*l*. of the assets are doubtful unless a discovery should be made in the mine. The shares in the company have been reduced by relinquishments from 15,000 at the last meeting to 13,000. We come now to the future, and to an important communication from the purser. We have for some years been trying to obtain a lease of the adjoining sett of East Cornwall, which in former times returned an enormous quantity of silver, and in which there is said to be good silver ground standing now, and have been all along pumping it dry. A large sum of money, however, which we did not feel justified in giving, was asked for the lease, and it is only very lately that the promise of it has been obtained by Mr. Bawden on easy terms—100*l*. out of the first profits. One of the oldest silver miners in the district, who knows the mine well, has offered to commence operations at once on tribute—that is, he will receive so much in 1*l*. out of the silver he raises. On this subject, a large shareholder whom I have known as taking great interest in practical mining for the last 40 years, writes—"I have had so much experience during many years in East Cornwall Mine, and have received so many lessons from the old tributers, that nothing can shake my belief on its great riches. As to Victor, I feel persuaded he will not disappoint your hopes, because he knows every inch of the ground." We propose, therefore, for a time, if it should be decided to go on, to confine ourselves as much as possible to working East Cornwall on tribute, and we do not think the tributers would be so anxious to take the ground on their own risk if they were not pretty sure of finding good silver. Captain Gregory, in his long and exhausting report, considers enough has been done to prove Langford.

The CHAIRMAN, in reply to a question, said that East Cornwall and Wheal Brothers as he had always understood were stopped in consequence of lawsuits some 70 or 80 years ago, at which time the Government laid a claim to all the silver found in these mines. At that time 100,000*l*. of silver had been raised. He thought the plan which he had sketched out in his opening remarks for working the mine would be found the wisest course to adopt.

Mr. BARGE moved that the accounts be allowed and passed, and printed and circulated amongst the shareholders, together with the agent's report.——Major MARTIN seconded the motion, which was put and carried.

Sir JOHN JOHNSON proposed that a call of 1s. per share be made, payable on or before 22nd October, with a discount of 5 per cent. on all amounts paid before that date.

Major MARTIN seconded the motion, which was put and carried.

The CHAIRMAN, in reply to an observation, said he understood it to be the wish of the shareholders to push on as fast as possible at East Cornwall.

A resolution was passed instructing the secretary to give notice to the shareholders that all shares on which calls are unpaid will be forfeited, and that a meeting be called for October 29th for that purpose.

The proceedings then terminated.

## SOUTH WHEAL FRANCES.

A 16-weekly meeting of shareholders in South Wheal Frances was held on the mine on Thursday.—Mr. CORNELIUS BAWDEN presiding.

The labour costs were 417*l*. 17s. 1d.; merchants' bills, 209*l*. 10s. 4d.; Stannary assessment, 11*l*. 15s. 8d.; Illogan rates, 55*l*. 8s.; bankers' charges (interest and commission) for six months, 91*l*. 12s. 5d.; lords' dues, 230*l*. 13s. 6d.. On the opposite side, for 133 tons 15 cwts. 11 lbs. tin there was received 675*l*. 13s. 7d., the tin selling at an average price of 50*l*. 7s. 6d.; extra carriage, 23*l*. 10s. 11d.; old iron, 11*l*. 14s 8d. The total credits, with sundries, were 696*l*. 16s. 6d. This left a profit of 308*l*. 9s. 6d., and increased the balance in favour of the mine to 463*l*. 19s. 4d.

The CHAIRMAN said it was a very great disappointment to the committee and the agents that there was not a larger profit. But during the 16 weeks some of their best points had troubled them with water. Under the circumstances the best that could be done had been done. The profit, in fact, was much smaller than had been anticipated; their returns were actually 13 tons behind the previous 16 weeks.

The report of the agents—Captains Craze, John Opie, and R. Williams—stated that Pascoe's shaft since the last meeting has been completed to the 246 fm. level, and we have now commenced to sink below by 12 men, and shall push on the sinking with all possible speed for another sump. The lode here is large, and worth for length of shaft 28*l*. per fathom. From the kindly appearance of the lode at this point, and the fact that the shoot of tin west is dipping towards the shaft, we expect an improvement in the shaft at an early date. The 246 fm. level has been driven west of shaft 12 fathoms, in the last five or six of which the lode has been worth fully 30*l*. per fathom, and this is its value in the present end. The 236 has been driven west of shaft 36 fathoms, and holed to the winze sunk below the 226, and the men set to stope, where the lode is worth 30*l*. per fathom for the width of the lode (9 ft.), and the lode will now be continued west in a lode worth 16*l*. per fathom. No. 2 stope, in the back of this level, is worth 22*l*. per fathom, and No. 3 stope is worth 20*l*. per fathom. The 236 fathom level has been driven east of the shaft 24 fms. This level has not turned out so well as we expected it would have done, but the lode in the present end is looking more kindly, and letting out more water than for some time past, and is worth 9*l*. per fathom. About 12 fms. in advance of this end we have commenced to sink a winze below the 226, where the lode is worth for 9 ft. long 50*l*. per fathom, and as we are pushing on this —the 226—end with boring-machine we have every reason to expect a good improvement here soon. The rise in the back of this level has been holed to the winze below the 226, and the ground set to stope where the lode is worth 12*l*. per fathom. A stope in the back of the 226 west is worth 10*l*. per fathom, and two stopes in the back of the 226 east are worth 10*l*. and 12*l*. respectively. The 205 west is producing a little tin, and a stope in the back is worth 9*l*. per fathom. A stope in the back of the 185 west is worth 24*l*. per fm. Daubuz's shaft is being sunk with good speed. Since the last meeting we have cut ground for bearers and cistern, and fixed a new lift, so that now the present sinking lift will enable us to reach the lode in the shaft, and which we hope to see in about 8 fms. further sinking. About the time of our last meeting we thought of driving a cross-cut to intersect the lode at another point before reaching it in the shaft. but upon dialling and levelling the West Frances workings with our shaft, we find we have not so far to sink to reach the lode by some 8 or 10 fms. as was expected. Consequently we have decided to continue the sinking with all possible speed, and hope to intersect the lode in about four or five months from this date, when we shall be able to extend east and west on the same. Soon after that is accomplished that part of the mine should become self-sustaining, if not a source of profit, to the concern. Our returns of tin are not quite up to expectation, owing, in the first place, to a falling off in some of our old stopes, and, in the second place, to our having met with more water in the 236 winze than we could cope with, and a hard bar of ground in the 246 west, which delayed the holing of the winze some fortnight or three weeks. However, having holed this, and the winze from the 226 to the 236, and our prospects having improved somewhat in other points, we hope our returns may be increased in the coming 16 weeks. (Applause.)

Captain CRAZE, supplementing the report, said nothing could be more discouraging or disheartening to them than that their efforts had not resulted in a dividend being made. For the first six or seven weeks they went on very well, returning quite 10 tons of tin per week, and then some of their upper stopes fell off, so that they had to give them up entirely—two in the 185 and one in the 226 end. Then they had hoped to have holed the winzes in the bottom of the mine—the 236 to the 246, and the 226 to the 236—in time to recover the loss they had had in the other stopes. It so happened that in one of the winzes they came across so much water that after a good trial they had to give pumping up as out of the question. And in that point they had been thrown back. They that day showed a smaller quantity of tin than they showed four months ago. These winzes were now holed, and, with the prospect of getting forth to have the good shoot of tin in the 226 east, he thought they had every reason to be encouraged, and hope our returns would be increased in the coming four months. And in four months' time Daubuz's shaft will be down to the lode. When they could throw Daubuz's part of the mine into anything like paying condition it would be all the better. They had spent in deadwork there 700*l*. in four months, so that they had really shown a profit in the upper part of the mine of 1000*l*. As he said he hoped within a very short period they would strike the lode there. In that event their prospects would be brightened in Daubuz's part of the mine as well as in Pascoe's.

Captain CRAZE, replying to a question, said the produce averaged 58 lbs. to the ton of stuff. That was very good; and he had no doubt the bottom of the mine would keep up to that. Down to within the past eight months they had generally been drowned out, and this had interfered with their development. They could not shut their eyes to the fact. They were thrown on the reserves above the 236 to a greater extent than they otherwise would have been. Therefore they had to rush down their shaft and drive their levels a little faster. They had two boring machines, one of which was driving the 246 west, and the lode in the end that day was from 9 to 10 ft. wide, and the lode was from ¾ cwt. to 1 cwt. to the ton of stuff. They only required a little time to recover themselves from the "drumming" they had had in the past. He was pleased to say the machinery throughout the mine was working admirably. They had no trouble at all on that score.

Mr. DAUBUZ: And difficulty in keeping the water?——Captain CRAZE: None whatever.

Mr. DAUBUZ: That is satisfactory.

Captain CRAZE said they could now more easily cope with water were it in 24 hours than previously, when the water was in for two hours only.

Mr. DAUBUZ moved the adoption of the accounts, and expressed the disappointment of the committee that the profit was not larger. He hoped, however, the returns would speedily increase.——Mr. HUTCHINSON seconded, and the resolution was agreed to.

## POLCREBO TIN MINE.

A general meeting of shareholders was held at the offices of the company, Great Winchester-street, on Thursday. In the absence of the Chairman of the company—Mr. W. Molesworth, M.P.—the chair was occupied by the Hon. ASHLEY PONSONBY.

Mr. WILLIAM BATTYE (the secretary) read the notice calling the meeting.

Mr. BATTYE mentioned that since the accounts were audited a portion of the arrears shown in the accounts had been paid.

Mr. BATTYE then read the accounts, which showed a balance of 39*l*. 13s. 2d. in the hands of the bankers, besides the cheques for the arrears of call, which have been received, but have not yet been cleared.

The CHAIRMAN moved that the statement of accounts be received and passed, and printed and circulated amongst the shareholders.

Mr. W. STRAPP seconded the motion.

The SECRETARY, in reply to Mr. HOLLAND, said that since the commencement of the company 1922*l*. worth of tin had been sold, and there had been spent in opening up the mine and for plant, machinery, &c., about 7000*l*.

The resolution for the adoption of the accounts was then put and carried.

Mr. BATTYE then read the following reports from the agents:—

*October* 6.—We send you the following report of the operations and prospects:—Highburrow's shaft is sunk 8 fathoms under the 60, principally on the north part of the lode for speed. We did propose to cross-cut south to intersect the main part of the lode, but fearing we should meet with an increase of water we continued the sinking to reach the 70 before opening on the south course; sinking by six men, at 14*l*. per fathom. The 60 east is driven from shaft 18 fms. 3 ft.; in the last 3 fms. the lode has much improved in size and value. We have sold a parcel of tinstuff from the 3 fms., which after clearing all returning charges gave a net value of 12*l*. 15s. 6d., and from the present indications we expect a further improvement; driving by six men, at 5*l*. per fathom. The 50 east is driven from shaft 44 fathoms. For the last 20 fathoms we have been driving in a splendid-looking lode, which produces tin, and we have also sold a parcel of tinstuff from this end. The prospects here are most encouraging for the driving of the 60, as this end is 25 fathoms beyond the 60; driving by six men, at 6*l*. 10s. per fathom.—Tribute; Pitch in back of the 40 west, by two men, at 13s. 4d. in 1*l*. Pitch in back of the 30 west, by two men, at 12s. in 1*l*. Pitch in bottom of the 40 east, by two men, at 13s. 4d. in 1*l*. In conclusion, we may here remark that at the last general meeting it was stated that tin-bearing ground would be met with in the 60 fm. level, judging from the appearance of the lode seen in the 50 fm. level. We are proud to report that we have intersected ore ground of a most promising character, and the sale of tinstuff is the best proof of the rich quality of the lode. During the quarter our property has much improved in value, and it is evident that in the deeper levels the lode is more mineralised and the tin of richer quality, and we strongly believe, looking at the good results of the 50 and 60 fm. levels, that the 70 fm. level will open up a good profitable section, which will reward the shareholders for their perseverance.—W. H. MARTIN, JOHN RICHARDS.

*October* 6.—I beg to hand you the following report of all operations now being carried on, together with the future propects:—Highburrow Shaft: This shaft is sunk below the 60 fathom level 7½ fms., and in about a month the 70 fathom level will be reached. The sinking has been carried on on the north part of the lode, which is the most inexpensive ground to sink in; the part of the lode carried has been unproductive, but in opening the 70 fathom level on the south part I have every reason to think that good tin ground will be met with. The 60 fathom level is extended east of shaft about 18 fms.; the first part of the drivage was unproductive, but in the last 4 fms. the lode has very much improved, and some good tin ground has been opened up; the lode in the present end is 2 ft. wide, worth 8*l*. per fm., driving at 5*l*. per fathom. The 50 fm. level is extended east of shaft 43 fms., and in the last month some good tin ground has been driven through, and the characteristics of the lode have generally improved. In the last 6 ft. of the drivage a small cross-course was met with, which slightly disordered the lode for the present, but in a short time the end will be free from its influence, when I think the lode will again be productive and profitable.—General Remarks: The 50 and 60 fathom levels are opening out much better than the 40 fm. level, the lode being stronger, better defined, and more regular. In about a month from this date the 70 will be reached, when you will be in a position to drive another level under the tin ground now in the 60 on the same monthly expenditure. The ground in the lower levels is getting more settled, and is quite congenial for the production of large quantities of mineral. The monthly cost is exceedingly easy, and with a continuance of the late improvements the sales of tin will increase. I consider the prospects, on the whole, to be very good, for it must be considered that this is a new and shallow mine, and by continuing the works with economy, I think the shareholders will in a short time be remunerated for their spirited outlay—JOSEPH PRISK.

Capt. MARTIN, in reply to a question, said the end in the 50 was looking as well as he had seen it for some time past.

Mr. HOLLAND expressed his disappointment that the results had not been better, and said he did not see that the prospects for the future were very encouraging.

Capt. MARTIN said mining was a speculation in which there must be outlay to lead to success. They had driven through the 40, which was an unproductive level such as would be found in all districts, and in the 50 they got into a strong mineralised lode. At the last meeting he was asked when they expected to reach it in the 60, and he said in about 16 fathoms. They had driven 14 fathoms and had come into it and had sold 12*l*. worth of tinstuff from it. Seeing there had been this great change in the 60, he expected something similar in the 70. As he had said they had sold tin, and to his mind the prospects of the mine never looked so well as at the present moment,

Mr. HOLLAND thought the past had certainly been disappointing, and that the amount expended in the work so far was large compared with the results.

Captain MARTIN said the amount was comparatively nothing compared with some other mines in the district.

Mr. W. STRAPP said there were good indications in the 30 and 40, but they did not continue so, but in the 50 and 60 fm. levels there was a great improvement.

Mr. BATTYE said no doubt they were disappointed in the upper levels; but, of course, in mining the ground varied in quality when it was not in settled ground. But, as Captain Martin had stated,

the lodes were now improving in value as greater depth was attained, and he believed that the shareholders would be fully rewarded for their perseverance. A mine was seldom found rich on the surface.

Mr. Holland asked why they did not go down in depth at once?

Capt. Martin pointed out that they were obliged by law to sink two shafts, and the levels were necessarily driven out for the purpose of testing the ground. The mine had been opened in a proper and miner-like manner. In one of the neighbouring mines they passed through 70 fathoms of unproductive ground, and in another mine 20 fathoms of unproductive ground.

The Chairman then moved that the agents' reports given above be received and adopted, and together with the accounts be printed and circulated amongst the shareholders.

Mr. J. Holland seconded the motion, which was carried.

On the motion of the Chairman, seconded by Mr. J. Strapp, a call of 1s. per share was then made, payable on or before 24th of October.

A conversation of no public interest ensued with regard to the engine which was erected some time since, it being stated by a Shareholder that its consumption of coal was large, and that it was not quite up to the mark in some other respects. Eventually the matter was referred to the committee to deal with.

The committee were then re-elected for the next four months.

The question of the forfeiture of the shares on which the calls are in arrear was then brought forward, but, after some discussion, it was decided to allow the matter to stand over till the next meeting, it being believed that in the meantime, a considerable portion of the arrears will be paid.

A vote of thanks to the Chairman closed the meeting.

## WEST BASSET.

A three-monthly meeting of adventurers was held on the mine, on Thursday, Mr. J. C. Daubuz presiding.

The labour costs for this period, and on account of thirteenth month, were 3699*l.* 12s. 4d.; merchants' bills, 1277*l.* 4s. 1d.; Illogan rates, 24*l.* 12s. 6d.; sundry cartage of coal, &c., 181*l.* 15s. 7d. The tin sold amounted to 112 tons 3¼ cwts., which, at an average price of 45*l.* 17s. 6d., realised 5147*l.* 0s. 9d., and left a balance of profit with sundry small receipts of 36*l.* 0s. 10d. The balance against the mine was thus reduced to 689*l.* 12s. 6d.

The Chairman: As compared with the previous account, we have sold 112 tons against 106 tons of tin. The average price is 45*l.* 17s. 6d., compared with 44*l.* 15s. last time, an increase of 1*l.* 2s. 6d. per ton. The amount realised has been 5147*l.*, against 4766*l.* The labour costs are about 340*l.* less, the cartage of coal being for the three months instead of the four months is 181*l.*, against 258*l.* on the last occasion, and the merchants' bills are 1277*l.*, against 1468*l.* That is rather less. The other items are just in the same proportion. And in regard to the ledger balances, we are happy to say we have 1041*l.* in the hands of the bankers, as compared with 150*l.* on the last occasion, so that financially we are in a better position. We are owing to bills payable 1601*l.* as compared with 1669*l.* That is about 70*l.* less. On lords' dues we have paid 100*l.* and with this I believe Mr. Pease was quite satisfied. The arreare of calls, although we had a call last time, are 165*l.*, against 189*l.* This is a matter of congratulation.

Mr. T. Robins Bolitho: Have you charged up your labour costs as closely as practicable?——The Purser: Yes.

The report of the agents—Captains J. Nicholas, and F. Hodge—stated:—The south part of the lode in the 155, west of Grenville's, is not to value. We are driving a cross-cut to prove the north part of the same, as we believe the main part to be standing in that direction. Two stopes in the back and the bottom of the 134 west are each worth 12*l.* per fathom. The 124 east is worth 12*l.* per fathom, and the rise in the back of the level is of the value of 14*l.* per fm. The stope in the east of the rise is worth 14*l.* per fathom, and to the west of the rise 14*l.* per fathom. No. 1 stope in the back of the 114 is worth 15*l.* per fathom, and No. 2 stope 15*l.* per fathom. The east stope at the 104 is worth 16*l.* per fathom, and the west stope 10*l.* per fathom. The lode in the 74 east is large and promising. A few fathoms driving will intersect the run of tin ground seen in the levels below. The lode in the 190, east of Percy's, is worth 8*l.* per fathom, and to the west 9*l.* per fm. The 180 west is worth 12*l.* per fm. Stope in bottom of 170 west is worth 13*l.* per fm. The lode in the 164 east is not to value. The rise in the back of this level west is of the value of 10*l.* per fathom. The 160 west is worth 10*l.* per fathom, and the rise in the back of this level is of the same value. At this point we are laying open a large section of profitable stoping ground, both on the old lode and on the flat lode. The 154 east is worth 7*l.* per fathom, and to the west low-price tin-stuff. The winze in the bottom of the 144 east is worth 10*l.* per fathom. The 124 east is worth 7*l.* per fathom. The stope in the level of the 104, east of North Frances shaft, is worth 11*l.* per fathom. The stope in the back of the 70 east is worth 15*l.* per fathom. The rise in the back of the 60 east is worth 8*l.* per fathom. We calculate to cut the lode in the 60 cross-cut, north of the old engine-shaft, in a fathom or two further driving. The lode in the Foxholt shaft below the 30 is disordered by a mixture of ground, but we consider this to be only temporary. The lode is now worth 8*l.* per fathom. The stope to the east of shaft is worth 15*l.* per fathom.

The Chairman: As compared with the report last time it is an improvement right through. Several points not working on the last occasion are now worth from 10*l.* to 15*l.* per fathom.

Mr. Woolcock: The report, as a whole, may be considered a better one than the one at the last meeting?——Capt. Nicholas: Yes.

Mr. James Wickett: I presume you expect to increase your returns?——Captain Nicholas: That is a question I should be pleased to say "Yes" to, and I think we shall increase the returns.

Mr. Wickett: It strikes me the report is better.——Captain Nicholas: Generally throughout the mine we are better, and we calculate to do a little better still.

Mr. Woolcock: The balance, I presume, you will carry on?——The Chairman: We have said nothing about making a call. I believe it may be made even now. (Laughter.) No notice has been given.

Mr. Woolcock: I do not think you have power.——The Chairman: It is a question whether we have power or not. Some people say we have.

Mr. Wickett: Do not discuss that.——The Chairman: The purser reminds me that in the past we did not give notice.

Mr. Bolitho: But now, under the Stannaries Act, you must give notice to make it legal.

The question lapsed, and Captain Nicholas said there was one thing he should like the adventurers to understand. They were not so near the bottom as was considered generally, and especially in the eastern part of the mine. He explained that this eastern ground was most extensive.

Mr. Bolitho enquired what had been sunk in the shaft since the last meeting.——Captain Nicholas replied that in Percy's shaft they had sunk from 2 to 3 fathoms in the three months, and at Percy's they had also taken up the east and west ends at the 90. They wanted to get down before the winter set in, for they had there no appliances for drawing the water.

Mr. Woolcock: Your pumping is very light here?——Captain Nicholas explained that the dams they had put in had been of great service, though costing them a great deal.

The Chairman: Do you expect to put on a Grenville's engine during the winter?——Captain Nicholas said they might have to put it on for a short time, but hoped that course would not be necessary.

Mr. Bolitho, in proposing that the accounts be adopted, observed that there were two or three satisfactory points to be noticed there. There was the satisfactory feature of the raising of the tin being reduced in cost from 48*l.* 15*s.* to 45*l.* 11*s.* That was 3*l.* or 4*l.* per ton. In addition to that a little more tin.—Captain Nicholas they all knew.

## SIERRA BUTTES GOLD MINING COMPANY.

The 31st ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Thursday,

Mr. F. Tendron (the Chairman of the company) presiding.

Mr. John Saul (the secretary) read the notice convening the meeting. The reports and accounts were taken as read.

The Chairman, after a few introductory observations, said that the working of the Sierra Buttes Mine for the past half-year had given a yield of $6·47 per ton, against an average in the seven preceding half-years of $6·93 per ton. The working cost for the six months, exclusive of the 9th level, had averaged $3·86 per ton, against an average of $4·36 in the seven preceding half-years. The quantity of ore milled during the six months had been 29,243 tons, against an average of 19,955 tons in the seven preceding half-years, and in the larger quantity of ore milled they had the explanation of the diminished working cost. They would be aware from the report that the Hitchcock mill had been closed, and, therefore, during the succeeding six months they would be dependent upon the working of the Yuba mill. That mill was finished on the 6th June. It now contained 60 stamps, and would deal with an average of about 4400 tons of ore per month. He could only speak in words of praise of all who had had to do with the construction of the mill. The workmanship was first-rate, and it would last for very many years. It was fitted up in every way with stone-breakers, and with the very best system of concentrators known up to the present time—Frue concentrators. There had been no sparing of expense in the construction of the mill; it had been built to last. (Hear, hear.) With reference to the closing of the Hitchcock mill, it was necessary to do so, because it was placed at the mouth of the 6th level, and all the ore above the 6th level had been exhausted—that was to say, there was no ore standing that they knew of that would pay the working cost of mining and milling. There was a great deal of ore still standing, but it was poor, and the expense of exploring the ground still further would be too great for them to undertake. They would, however, continue the driving of the 6th level, which was the pioneer level of the mine. The face of it was now about 1100 ft. west of the western shaft, and it was some 500 ft. beyond what was called the western shoot—the shoot of ore they were now working. Although there was no mineral in the face of this level to pay, the vein matter contained a small quantity of gold, and it was most important that the level should be proceeded with. They had some thousands of feet yet to follow the vein, and there was no knowing how soon they might come upon another shoot of ore, and if so, they would have reason to expect that the shoot would last up to the surface, and as this would be in virgin ground it would give them a large quantity of ore. It was their duty to go on with this level, and he felt a certain amount of regret that it had not been pushed forward more vigorously. The pay ore between the 6th and 7th levels had been almost worked out. The custom had been to take the ore from the 7th level to its mouth, then draw it up to the 6th level to the mill. The only pay ore they knew of in any quantity, at present, was the western shoot, which had widened out as they had gone down, and was worked now for a length of about 140 ft., where it was rapidly approaching the 7th level. At the 7th level, near the 27th cross-cut, which was in a direct line with the body, in opening out a stope in the preceding half-year they had come upon some exceedingly rich ore, but in very small quantities—some 8 tons altogether. That, however, increased the returns very much for a couple of months In fact, he did not think he would exaggerate in saying that the 8 tons gave at least $6000 or $7000 of gold. Unfortunately there was none of that ore now in sight; but it was an encouraging feature that there was every appearance of the western shoot making down towards the 8th level. The 8th level, up to the present time had been a disappointing level. The common-sense reasoning which had been adopted—that because the 7th level was much better than the 6th, so the 8th level would be so much better than the 7th—had not proved correct. The orebody had been shorter, and not of so rich a quality, while it had been very expensive to work, because, after the first 240 ft., they had had to follow the body in the quartz itself, which was hard and expensive driving. Although there had been gold in the whole of the driving it had not been sufficient to pay. The vein had been from 5 to 8 ft. wide, and it had contained in places $5 to $6 ore, but in other places it had yielded ore of the value only of $2 or $3, and to work such a body beyond the drift that was being carried on would not have paid. Therefore, the 16th cross-cut was made from the footwall. It went through 71 ft. of horse matter, and just as he (the Chairman) arrived at the mine it had uncovered a body of beautiful white quartz—artistically beautiful—but not beautiful in a mining sense. They then went through this wall matter for a distance of 20 ft., frequently testing its value, and he well remembered the exceeding satisfaction of Capt. James when he found a fair quantity of gold in his spoon, and that he could pronounce the ore $5 milling, at all events. The cross-cut was continued, and the last news to hand was that for 8 ft. the lode averaged $6 to the ton. That was a strong body and would pay well, and as they opened out westward they would in all probability meet the western shoot which was making down in the hanging-wall, and they were very hopeful of opening out a large body of ore, so that the expectations formed of the 8th level might after all prove fairly correct. (Hear, hear.) In the easterly direction cross-cuts had been made into the Willoughby shoot, but they had not found any pay ore, although the lode was a very strong one, and very wide. It would be satisfactory if they could make a level right through the shoot, or if they could put in more cross-cuts, but that would be so expensive that they could not with their present resources do it. All that they could do was to follow every favourable indication, and at some future time they would probably make one or two more cross-cuts. The body of quartz had so much improved in the 8th level that they had fair reason to expect that it would make down to the 9th. They had sunk some 70 ft. in this mineral, and it was of very good quality, $10, $12, and $15 ore. It was not a very large body, but it was quite sufficient even at present to help in keeping up the average yield. If they found the amount of amalgam on the plates in the early part of the month poor they did a little more work in the winze, while if the amount of the amalgam was fairly rich in the early part of the month they did less work at the winze. They were thus enabled to keep up a fair average return, their great desire being to cut the body in the 9th level. They had had to deter further prospecting in the north cliff until the ventilation could be improved. A great deal of anxiety had been felt as to the Willoughby shoot in the 9th level, in consequence of the possibility that it had died out, or that it had been passed by. If the shoot was there they ought to strike it by the end of the present month. Mr. Johns and Captain James were confident that they had not yet reached it, because they had not met with the large stream of water which had always been met with in the upper levels before reaching the Willoughby shoot. At present the ventilation in the 9th level was not very good, but to improve this, and to test the intermediate ground, and to make sure of the locality of the shoot, they were now making a rise, and in the course of the next few months that ground would all be thoroughly tested, so that by the date of the next meeting the shareholders would have some positive and definite information on that subject. Meanwhile they were doing what they could to make the company strong financially, and it was with no little satisfaction that he told the meeting that the company was at present 8000*l.* better off than it was six months ago. The same dividend was now recommended as was paid six months ago. (Hear, hear.) A most satisfactory source of revenue was coming in to help them—the chlorination works would be a success. On that point he could speak positively. (Cheers.) They were now putting up a reverberatory furnace, which he hoped would be in operation by the end of the present month. Meanwhile the Bruckner furnace was doing its work as well as possible. He had seen the first 3 tons passed through, and an average of $95 per ton was got out of each ton of sulphurets. Moreover, the tailings were assayed, and they gave $55 to the ton, and they knew that by grinding them with quicksilver they could get out 90 per cent. of the contents, so that the sulphurets were worth fully $150 per ton, and they would certainly get out a large proportion of the $150. They were still saving by the concentrators about 24 tons of sulphurets every month, or about 18 tons when dried and roasted, and those 18 tons would certainly realise, as far as could be judged by actual experience of working, something like the figure he had told them of $150 the ton. The expense of putting up the whole of the works would be about 1000*l.* which would be paid for out of the first proceeds of the sulphurets; and if they could get their returns increased by $2000, $3000, or $4000 a month, that would be a most important addition. (Cheers.) Besides this they had 240 tons of sulphurets to be treated, which they knew to be worth at least $150 a ton; and the expense of working them when once the machinery was put up would be comparatively little—$20, $25, or $30 a ton, including every expense. (Cheers.) No process was more simple or more effectual than the chlorination process, but it involved a certain amount of expense which prevented its being used with the poor sulphurets. Everything was hopeful, and they were doing what they could to make the company strong by improving its financial position. (Cheers.) He now came to the Plumas Eureka Mine. The average yield of the ore had been, including the tailings, $8·10 per ton, as compared with $7·27 in the seven preceding half-years; while the cost had been $4·85 compared with $3·87. The quantity of ore milled had been 27,779 tons, compared with an average of 29,117 tons in the preceding seven half-years. The amount of ore milled was thus approximately the same; but the cost was nearly as possible $1 a ton higher in the past half-year. This increase was entirely accounted for by the fact that the two shafts had cost about $26,000 to sink. They were pumping by means of water-power very effectually; but in addition to that they had a double-acting steam pump at the bottom of the shaft, and they were now able to keep the 150 level, which was being driven from the shaft, fairly dry. A vein of considerable strength had been opened out. The walls were exceedingly solid, and there was every promise for the future; but up to the present time the ore had been very poor—$4 and $5—although small portions gave very large assays when tested at San Francisco. Their future must greatly depend upon sinking to a great depth and continuing the Eureka level; but this, of course, wohld involve considerable expense. They would have to put up ordinary Cornish plunger pumps, and that meant an expenditure of something like $60,000; but of course great attention was being given to the matter before going to such an expenditure, so as to see that they would get a sufficient return to justify such an outlay. (Hear, hear.) The face of the Eureka level might be discouraging for the moment, but there was no sign of the fissure closing altogether. If they should meet with any discovery, they would have virgin ground to the surface; and he had, therefore positively instructed those in charge that the Eureka level must be continued all through the winter. Twelve months ago he had told the shareholders that they must be prepared for low returns during the winter months; but to the surprise of everybody, on the spot as well as here, the returns were better than ever, owing to the mildness of the winter permitting them to work the outside mines, and also owing to the fact that they had had the exceeding good fortune to strike the flat vein. The flat vein was opened out on New Year's-day, and they called the working New Year's drift. Up to the time of his leaving it had been opened out about 300 ft. in every direction, and one-third of the stuff milled in the half-year had come from that vein. (Cheers.) The last account of the vein showed that it had temporarily fallen off in value. During the half-year they had had been making a tramway up the side of the mountain to enable them to work the outside mines during the winter. The Chairman then referred at length to the importance of the discovery of the flat veins, pointing out their position on the plan. One of them had been traced for a distance of more than 1500 ft., with a large quantity of profitable ore all the way through. There was no reason why they should despair of doing as well in the future as they had in the past. (Cheers.) Their financial position was most satisfactory, the reserve being 10,000*l.* better than it was 12 months ago. (Cheers.) He moved the adoption of the reports and accounts.——Mr. Charles Wright seconded the motion.

Mr. Frewer said that after the very ample and clear expositions of the present position of the mine, there was hardly any point left upon which to make an enquiry. Could the Chairman, however, tell the shareholders what was the supposed area of the flat vein, which had hitherto been so successful. Of course, the discovery of flat veins would necessitate a reversal of the ordinary operation of mining, and it was important to know whether the area was extensive or otherwise.

The Chairman, in reply, said that as soon as the junction is made between the Elizabeth and the Batten he would be able to speak with absolute certainty on the matter; but he felt all but certain that they were really the same body, because the difference of level was only 60 ft., and they were making in the same direction. Assuming that to be the case, then they had a contiguous body for 1500 ft., approximately north and south, and worked for 500 ft. in places from east to west, so that they were very large bodies indeed. The Eureka Mountain extended for miles with no great break, and undoubtedly enormous bodies of ore existed in the property; but money would have to be spent before they could expect to find deposits. They were really the pioneers of quartz mining, seeing that both the Plumas Eureka and Sierra Buttes workings were started about 1851.

The reports and accounts were then unanimously adopted.

The Chairman moved the declaration of a dividend of 6*d.* per share, free of income tax, on the Sierra Buttes shares, payable on the 9th inst.

Mr. Frewer, in seconding the motion, said he would have been quite as well satisfied if the dividend were twice the amount recommended.

Mr. Bolton asked why a larger dividend was not recommended, as the financial position of the company seemed to warrant a larger payment?

The Chairman said there were two reasons why a larger payment could not properly be made. In the first place, they were obliged to find 20,000*l.* in the early part of 1887 to pay off the debentures, and, in the second place, they had still 6000*l.* to write off the cost of the 9th level. This level had cost 21,000*l.*, of which only 16,000*l.* had been written off. (Hear, hear.)

The motion was carried.

The Chairman then moved the declaration of a dividend of 1s. 6d. per share on the Plumas Eureka shares, payable free of income tax, on the 9th inst.——Mr. Holdsworth seconded, and the motion was adopted.

The Chairman also moved that the cordial thanks of the directors and proprietors should be given to Mr. Johns, Captain James, and the other officers of the company abroad and at home for their very zealous and very able services. (Cheers.)——Mr. Harris seconded the motion, which was agreed to.

Mr. Bolton proposed a vote of thanks to the Chairman for his clear and explicit statement, and to the directors generally for their management of the affairs of the company, the results of the management being entirely satisfactory. (Hear, hear.)——Mr. Frewer, in seconding the proposition, congratulated the Chairman on his return from a somewhat arduous expedition in the interests of the company. (Cheers.)

The vote having been accorded, the Chairman briefly acknowledged the compliment, and the meeting closed.

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The New South Wales Loan.—Tenders for 5,500,000*l.* New South Wales Government 3½ per Cent. Inscribed Stock were opened at the Bank of England on Wednesday, no tender being received at below 91*l.* per cent. per 100*l.* stock, when 12,380,700*l.* was applied for at the minimum up to 95*l.* 12s. Several tenders were for large amounts—one for 1,060,000*l.* and one for 1,050,000*l.*, one for 1,000,000*l.* and one for 700,000*l.*, and one for 550,000*l.* at 91*l.* 11s. 6d., one for 137,000*l.* at 91*l.* 6s. 6d., six for 100,000*l.* each at 91*l.* to 91*l.* 12s. 6d., one for 75,000*l.* at 91*l.* 13s. 6d., 14 for 50,000*l.* at 91*l.* 5s. to 92*l.*, five for 40,000*l.* each at 91*l.* to 91*l.* 13s. 6d. Tenders at 91*l.* 11s. 6d. will receive about 26 per cent. of the amount applied for and above in full. The average price obtained was 91*l.* 13s. 5d. The loan was quoted on the Stock Exchange at ½ to 1¼ prem on the minimum price of 91*l.*

## PRINCE OF WALES MINE.

A general meeting of shareholders was held at the offices of the company, Gracechurch Buildings, Gracechurch-street, yesterday,

Mr. J. Y. Watson, F.G.S., in the chair.

Mr. C. B. Parry (the secretary) read the notice calling the meeting. The statement of accounts showed a balance of liabilities over assets of 900*l.* 14s. 5d.

The Chairman: Gentlemen,—At our last meeting in May we came before you with four months' costs and a debit balance of 1027*l.* 13s. 6d. We have now to bring in the 13th month, and therefore have five months' costs charged in present accounts, and have a debit balance against us of 900*l.* 14s. 5d. Our tin sales have realised 424*l.* 6s. 3d., and copper ores for sale are estimated at 100*l.* In May we owed merchants 1509*l.* 6s. 9d., have paid off nearly 600*l.* of these old debts, and our indebtedness now is 1417*l.*, including acceptances given by the secretary for 840*l.* 4s. 8d. The call made at the last meeting of the shareholders was scarcely more than the debts due at that time, and of course provided nothing for current costs, which show a loss on the five months of 1056*l.* 16s. 11d. In May our operations had been confined to sinking Watson's engine-shaft to the 115, and a cross-cut had then to be driven 15 fms. through hard ground to intersect the lode, which at places had been very rich for tin in the level above. The agents had hoped to accomplish this in three months, but it has taken four. There were also at that time eight pitches at work in tin ground which we have hoped would increase our returns; but five of them were soon given up. In cutting plat at the 115 an entirely new tin lode was discovered, and so promising that orders were given to drive a cross-cut towards it at the 102, which was done. The agent's report will give you a full account of the work done since last month, and at the request of a large shareholder Capt. Nance has this week specially inspected the mine, and his report will be read to you. He considers we are opening out a good tin mine, and that the new lode lately discovered will soon pay the costs of the mine. The main lode lately cut at the 115 is 8 ft. wide, and may soon be in ore, as it gets out of the hard which has been near the shaft all the way down and in which the lodes have been poor. We now learn for the first time through Capt. Nance that there is in the mine a good lode of wolfram, and the stone of ore which is brought up is a very rich ore. He states in going to the 102 end east Capt. Roberts informed him that for the last few feet driven in that end there was a lode 5 ft. wide, with wolfram all through it, that he raised some, and dressed it, and did not know that wolfram had risen to a remunerative price, or he should have reported it. The end, however, was, of course, stopped, when all operations except sinking the shaft were ordered to be suspended. He has now been ordered to break down a ton of the stuff to sample it, and ascertain its value, and it is probable it may prove, as Capt. Nance thinks, of great value to the mine, wolfram being in great demand just now. In conclusion, the Chairman said that Capt. Nance was present, and would be happy to answer any question which might be asked.

Mr. Parry then read the agent's report, and a special report by Captain W. Nance, as follows:—

*October* 7.—I beg to hand you report of the mine for your consideration at the meeting, to be held on the 9th inst. Since the last general meeting in May last we removed the penthouse in the 102, divided and cased the shaft from that level to the 115, cut a large and convenient tip-plat, driven a cross-cut south 17 fathoms, making it altogether from engine-shaft 17 fms. 3 ft., and intersected the main lode; but very little has been done on it more than the cross-cut driven through it, where it is 7 ft. wide, composed principally of capel and spar and low quality tinstuff, and has a promising appearance for an early improvement. This level will open out the main lode 13 fathoms deeper than the 102, and lay open 12 fms. in height of stoping ground, and from the change which is taking place in the nature and character of the lode from copper to tin as depth is attained we have every reason to believe it will be profitable ground. We have driven the 115 east on the new lode 9 fms. 3 ft., lode varying in size from 3 to 6 ft. wide, the whole of which yields tin, and in places worth 6*l.* per fathom. Lode now worth 5*l.* per fathom, being 4 ft. wide, with a strong flookan on each side, the tin-bearing part being 2 ft. wide in the middle. This end must now be very near the No. 1 cross-course, to the east of which I have a strong opinion that we shall find a good lode. We have also cut ground for tramroad, &c., around the south side of the shaft, and driven west 3 fms. 3 ft. on a lode from 3 to 9 ft. wide, tinny throughout, and in places worth 6*l.* per fathom, with very rich patches of tin; lode at present disordered by killas in the lower part of the level, the upper part being composed of a beautiful prian, capel, and tin, and worth 6*l.* per fathom. At the 102 fathom level we have driven a cross-cut north 4 fms. 3 ft., and intersected this lode, since which we have driven through it 7 ft. and cut the footwall. Here the lode is composed principally of capel and spar, mixed with a little killas and mundic, and producing tin throughout the whole width, but not enough to value; but notwithstanding this its appearance is sufficient to warrant further development, and that I think should be by opening a little on it and putting up a rise, as this lode is subject to making flat floors or beds of tin, it cannot be done by sinking by reason of the water. We have two tribute pitches working by seven men in the back of the 102 east, one in the back of the 90 west, and one in the back 45 west with two men each. I wish to keep before your notice two or three special features in the mine, which I think are important, first, you should not be discouraged at the present low value of the main lode in the 115 cross cut, for it will be remembered that nowhere has the lode been productive below the 55 fathom level opposite the shaft, and nowhere has it been seen of such a size and character as a tin lode as in the present bottom, where an important discovery may be made any day; secondly, your cheering prospects on the new lode, which must be considered good; and, thirdly, the probable improvement which may be expected to take place as depth is attained towards the junction of the main and new lodes, and also the junction of those lodes with the Goodluck lode, as may be seen by referring to the transverse section. Our machinery and plant are in good order, and a little improvement in these points would establish the company in a good position.—Stephen Roberts.

*October* 7.—I inspected this mine on the 6th inst., and the following is my report of the same:—The mine has every appearance of passing from copper to tin in depth. In the 102 fm. level the main lode has been driven through over 100 fathoms in length, and produced tin for nearly the whole length, and in many places has been stoped away for tin and copper; and in the eastern end there is a good lode of wolfram, which is being sampled to ascertain its value. The western end is within a short distance of the junction of the new lode, and should be driven to it, as this new lode is now producing very good tinstuff in the 115 fm. level, both east and west of the shaft. At the engine-shaft this lode is situated 20 fathoms north of the main lode, and forms a junction with it 100 fathoms west of the shaft, as well as 30 fathoms below the present bottom. A very important point is to drive the western end on the course of the said new lode as fast as possible, as it approaches the main lode in that direction, and there is a course of tin 40 fathoms west of shaft on the latter lode, which could be quickly reached by a short cross-cut from the former lode, the difference of speed being 3 to 1. Then the engine-shaft should be sunk as fast as possible on the course of the new lode to the junction, as the ground is very favourable for sinking. The 115 cross-cut has been put through the main lode, which is 8 ft. wide with a good leader of tin ore, on the footwall 1 ft. thick, and some low grade tin in the middle part. 47 fathoms below the present bottom on the Goodluck lode, which has been very productive of tin above the adit, also forms a junction with the main lode, so that the prospects in depth are very good. On the new lode there are two flats of very good tin, and these should be opened on, as I think they would at once help returns. Judging from the appearance at present, I should think with a little pushing the mine could soon be made to pay costs. It is well equipped with machinery, with good pumping, stamping, and winding engines, and a water power Cornish crusher, and every facility for handling the ore economically.—William Nance.

The Chairman: I think you say the new lode will soon be able to pay the costs of the mine?——Captain Nance: The flats have done much, and these will help the returns. The new lode has been changeable, and I do not like to speak definitely about it, but I think the 115 east was more settled than it was in any previous driving. There is a tin matrix in the lode, but how long it will last I cannot say. If it continues as rich as it was when I saw it it will more than pay the cost of the mine.

Mr. Alfred Thomas said that whilst Captain Nance's report referred to a leader of tin 1 ft. thick, the agent's report did not say anything about a leader of tin. Of course a leader of tin 1 ft. wide would be very valuable. Could Captain Nance value the lode at that point?——Captain Nance: The lode at that point was worth about 6*l.* per fathom.

Mr. Thomas: Is the lode in settled ground enough to drive east and west?——Captain Nance: Yes; the new lode or No. 2 lode ought to have been seen long before this. I think the lode is standing whole to surface, and it has not been touched anywhere except that the adit cross-cut has gone through it; if that lode continues good you will have it in whole ground to surface. Captain Nance added that the lode in the eastern end was valuable, and by working it they would be able to open out the mine expeditiously, because it converged towards the main lode, and would form a junction west. The ground in the bottom of the shaft was softer, and another lift might easily be run down, and he strongly recommended the sinking of the shaft on the course of the new lode.

The Chairman said there might be some little difficulty with the Government Inspector about sinking on the course of the new lode, because of the angle; but if they could sink in that way, they would have tin all the way down.

Mr. Thomas thought they need not anticipate any difficulty on the part of the Government Inspector; all they had to do was to sink the shaft with proper regulations.

Captain Nance, in reply to Mr. Alfred Thomas, said he had himself broken several stones from the 102 end east which had contained wolfram throughout, and this was undoubtedly a new feature in the mine.

The Chairman said they had ordered 1 ton of this wolfram to be broken, and he would be glad if anyone would tell them what it was worth. He was told at East Pool they were getting all the wolfram they could, even from the halvans; and some time ago he was told by an engineer there was a very good demand for it.

Mr. Thomas said at East Pool they used to get 60*l.* per ton for it, but now they only got about 30*l.* He asked Capt. Nance whether he meant to infer in his report that the mine was not being worked sufficiently and energetically?

Capt. Nance said what he meant was that the agent should be supplied with sufficient funds to open out the plats as soon as possible. The prospects were such that money should be provided and spent energetically in the sinking of the shaft, and the driving of the new lode west.

Mr. Thomas said there was no doubt the prospects of the lode were looking very kindly. The lodes were undoubtedly productive of tin, although not to any great extent, but he presumed that was because they were passing from the copper to the tin matrix. He hoped the management would continue to sink the main shaft. If the lode should turn out as well as it seemed to promise they would soon be getting on to meet the costs.

The Chairman pointed out the costs had been considerably reduced, in some months having been under 200*l.*, whereas they used to be 300*l.* to 400*l.*

Mr. Wagstaff moved the adoption of the accounts and the agent's report, and that they be printed and circulated among the shareholders.——Mr. Thomas seconded the motion.

The Secretary said that everything had been charged to date, and there was not a single bill outstanding that he was aware of.

The motion was carried.

On the motion of Mr. Thomas, seconded by Mr. Wagstaff, a call of 1s. 6d. per share was then made, payable on or before the 30th inst., with a discount of 5 per cent. upon all amounts paid by that date.

A vote of thanks to the Chairman closed the proceedings.

## THE BOARD OF TRADE RETURNS.

The Customs returns for the past month have just been published by the Board of Trade, and complete the three quarters of the year. Some improvement might have been expected but for the check caused by the disturbance of the Eastern Question. However, they are not really worse than of late, but they indicate that the larger quantities imported or exported have been at greatly reduced values, hence most of the decrease. For September last the exports of home productions were valued at 18,621,000*l.*, or a decrease of 9 per cent. compared with the corresponding month, and 9 per cent. compared with September, 1883. The imports were 29,963,000, or a falling-off of 7 per cent. as against last year, and 7¼ per cent. against the year before. The export of foreign and colonial produce was 5,086,000*l.*, or 20 per cent. less. The results for the three quarters are a reduction of 9 per cent. in our exports, 4 per cent. in our imports, and 10 per cent. in the reshipments.

Reviewing the month, we have in the exports a large decrease in coal, and notwithstanding an increase in the tonnage of iron and steel a reduction in value, whereas the previous returns, it will be remembered, showed that the value of the preceding year had been fully maintained. The item of railroad iron, however, exhibits an increase under value, owing to a very considerable export chiefly due to steel rails, the increase in which is estimated at 4250 tons of the value of 22,000*l.* Cotton, jute, and linen yarns exhibit a decrease, but woollen yarns augmentation, while cotton, jute, and woollen goods have fallen off, cotton manufacturers very materially, with an exceptional increase in linen. As regards imports, most provisions and articles of food show a marked reduction, the exception being in respect of tea, coffee, sugar, spirits, and tobacco, with smaller deliveries of stocks. Wheat arrivals for the month were 1,458,000 qrs., against 1,623,000 last year. All raw materials, except jute, likewise were received on a much smaller scale. The import of oils and chemicals, however, improved. Of the reshipments, the most striking result is the stoppage in wool, the total being only half in value, and the quantity 24,000,000 against 42,000,000 lbs. last year.

Annexed is our usual table of imports and exports of metals:—

IMPORTS.

| | Quantity. | | Value. | | Increase or decrease. |
|---|---|---|---|---|---|
| | 1884. | 1885. | 1884. | 1885. | Quan. Value. |
| | Tons. | Tons. | £ | £ | Per cent. |
| Copper ore | 15,212 | 9,674 | 221,791 | 65,453 | 36* 70* |
| Regulus and precipitate | 5,548 | 5,650 | 173, 73 | 136,283 | 2 22* |
| Unwrought & part wrought | 2,910 | 4,241 | 162,328 | 189,087 | 46 16·75 |
| Lead | 7,884 | 5,343 | 85,167 | 63,813 | 32·15* 25* |
| Tin in blocks, ingots, bars, or slabs | 2,775 | 1,871 | 228,815 | 170,769 | 32·70* 25·50* |
| RE-SHIPMENTS. | | | | | |
| Copper | 708 | 349 | 40,499 | 16,204 | 50·70* 60·75* |
| Tin | 1,169 | 1,120 | 96,552 | 103,172 | 4·20* 6·75 |

EXPORTS.

| | Quantity. | | Value. | | Increase or decrease. |
|---|---|---|---|---|---|
| | 1884. | 1885. | 1884. | 1885. | Quan. Value. |
| | Tons. | Tons. | £ | £ | Per cent. |
| Copper, unwrought | 1,126 | 1,579 | 65,273 | 74,730 | 40·2 14 |
| Wrought | 1,520 | 1,749 | 99,278 | 99,794 | 13·7 ½ |
| Mixed or yel. metal | 1,827 | 1,734 | 97,984 | 78,498 | 5* 20* |
| Total copper | 4,474 | 5,073 | 262,535 | 253,022 | — — |
| Lead | 2,302 | 3,017 | 28,374 | 38,708 | 30·4 37 |
| Tin | 437 | 470 | 37,680 | 44,035 | 7·2 17 |
| Coal and coke | 2,115,669 | 1,960,089 | 977,328 | 879,405 | 7* 10* |
| Iron and steel | 309,704 | 319,671 | 2,09?,167 | 1,934,260 | 3·3 7·4* |

* Denotes decrease.

As one of the sequences of the Clerkenwell fire we are requested to state that Messrs. Abbott, Page, and Co.'s October Circular is delayed a day or two.

## LIVERPOOL CORPORATION STOCK.

The Bank of England invite tenders for one million and a half of Three-and-a-Half per Cent. Stock, secured upon the rates levied by the Liverpool Corporation over the whole of its rateable property. The proceeds of the loan are to meet expenditure on important public works. The minimum price is fixed at 99, and tenders must be sent to the Bank of England by 2 P.M. on Friday next. Last night's price of the existing stock was 99¾. This stock is available for the investment of trust moneys.

## THE EMPLOYMENT OF GIRLS AND WOMEN AT MINES.

The employment of girls and women at coal mines has long been a standing reproach to some of our mineowners, and we find that the subject has been taken up in the recent number of the *British Medical Journal*. The writer of the article, however, is incorrect when he states that after diminishing for a considerable period, there has been a considerable increase during the last four years. The total number of females employed at coal mines in 1884 was 4458, of which 329 were between the ages of 13 and 16, and three between 10 and 13. In 1883, however, the total number employed was 4479, of which one was between 10 and 13, and 288 between 13 and 16, so that there was a decrease of 21 in 1884, as compared with the previous year. Of the total of 1884 there were 1520 females employed at the mines in Lancashire. Those who have visited the mines in the county palatine it is needless to state that they must have been greatly surprised at the appearance of the females on the banks of the pits, for they cannot easily be distinguished from the males who work along with them. There is little or no distinction in the attire of the two sexes, and when they return from work with their blackened faces and male attire they are certainly no credit to their employers, the sex, or even the class they belong to. It is true that a similar state of things prevails in the mines of Belgium, in some of which young women even work underground. In those mines the men work in companies of five or seven, and in attendance upon them are two young women, called the *bouteur* and *chargeur*, one collecting the coal into a heap, and the *chargeur* filling it into the tubs. The women are dressed in jackets and trousers, like the ordinary pitmen. The latter receive 1s. 7d. to 1s. 8d. a day, which, we believe, is rather more than is paid to the Lancashire women. There are some things which may be worthy of copying from our Continental neighbours, but we certainly believe that we should do well to allow Belgium the monopoly of female labour at and in the mines. The late Lord Shaftesbury succeeded in forcing females out of the mines in Great Britain, and the time has certainly come, in our opinion, when they should not be allowed to work on the pit banks. Mr. W. Pickard, the miners' agent in the Wigan district, states that the miners, as a body, are strongly opposed to the employment of female labour at the mines, and discountenance it in every way they can. But many of the females prefer it to going into household service, for they have more time at their disposal. The only reason that can be assigned for their employment is that they do a certain amount of work for less money than it would be done by men. The work, however, is by no means easy, for at many places it consists of taking the corves loaded as they come from the bottom of the shaft to the screens and wagons and tipping them over. They have then to take the corves back to the bank. The mineowners would now do well to endeavour to do away with female labour as quickly as they can, for it is not only an admitted evil, but is looked upon as a disgrace to our civilisation, and there is very little doubt that if they do not the New Parliament will deal with the matter, and that in a summary manner. But no legislation should be necessary to banish female labour from the pit banks, the same as it was from the underground workings, which, in the first instance, was condemned by public opinion and passed by Parliament with scarcely any opposition.

The Clifton Hall Colliery Explosion.—The report of Mr. Arnold Morley, M.P., upon the circumstances attending the fatal explosion which occurred on the 18th of June last in the Trencherbone Mine of the Clifton Hall Colliery, by which 177 lives were lost, has just been presented to both Houses of Parliament. At the inquest on the bodies of those who were killed by the explosion the coroner's jury found that the emission of gas was sudden and unexpected, and that no person was either criminally or censurably to blame. The report states that the Trencherbone Mine was as a rule worked with naked lights, although the Davy and Clanny lamps were occasionally used. The final report of the Royal Commission on Accidents in Mines, appointed in February, 1879, containing the result of the elaborate experiments which were made to investigate the comparative merits of the various kinds of safety-lamps, has not yet been published; but Mr. Morley asserts that independent investigations have clearly demonstrated that the Davy and the Clanny lamps afford very little safety in the presence of an explosive mixture of air and gas, while the superiority of the Mueseler and the Marsaut lamps had been established by the most recent investigations. He further states that the general opinion expressed in mining circles was one of surprise and regret at the great and unaccountable delay in the completion and publication of the report of the Royal Commission and of the belief that had even a reasonably prompt action on the part of the Commission followed its appointment, coupled, if necessary, with legislation, much of the doubt and hesitation which surrounds certain disputed questions of colliery management might have been avoided, and some at all events of the loss of life which has since happened might have been prevented. Mr. Dickenson, Her Majesty's Inspector of Mines for the district had been it was stated, pressing on the notice of Messrs. Knowles, the owners of the mine, the importance of the question whether the substitution of lamps for naked lights would not under all the circumstances of the mine, conduce to the greater safety of the men; but Messrs. Knowles were of opinion that, taking into consideration the immunity which had been enjoyed at the Clifton Hall Colliery during a long period of time from accidents arising from explosions of gas and the belief, which was very commonly held that there was more danger from accidents caused by falls of roofs and other causes independently of the existence of gas in mines worked by lamps as compared with those where naked lights were in use, there were no such circumstances in the past history or at present existing in the case of these mines as would justify them in making the change suggested, especially as the Davy lamps gave the minimum of light with the minimum of protection. Mr. Morley, after exhaustively examining the facts of the case, recommends the compulsory use of safety-lamps in the mine in place of the naked lights hitherto used, the provision by the owners of the best kind of safety-lamps, to be the property of the owners and used without payment by the men, the strict enforcement of the rules against smoking, greater care in the selection of men for the posts of underviewer and firemen, the substitution of a mode of ventilation which will obviate the necessity of the return air passing over the furnace, and the taking of the ventilation on more frequent occasions. Mr. Morley concludes his report by observing that on the whole the general system of working and of management in the mine was satisfactory, and that there were no grounds to justify a prosecution against any person in connection with the explosion.

Gas Shares.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane has been:—Bombay, 6¾ to 6¾; ditto, New, 5⅛; Brentford, New, 162; Buenos Ayres, 13¼ to 13⅛; European, New, Five per Cent., 11⅛; Gas Light, A, 234½ to 235¾; ditto, C, D, and E, 249; ditto, H, 153; ditto, Six per Cent. Debentures, 158; Imperial Continental, 214½ to 216; Monte Video, 18 to 18⅛; Para, 3⅛ to 4; Rio de Janeiro, 23 to 24½; San Paulo, 16½; South Metropolitan, A, 276 to 277; ditto B, 226½ to 227¾. Gas stocks quiet. Foreign companies slightly firmer.

# Mining Correspondence.

## BRITISH MINES.

BEDFORD UNITED.—H. Trezise, October 6: There is no change in any of the points of operation since last week. At the 90 and 75 west the lode is without any important alteration. The stopes and pitches throughout the mine are just as they have been for some time past. The work of the mine is progressing satisfactorily.

CARN CAMBORNE.—W. C. Vivian, October 7: I beg to inform you that the lode in the 105 fm. level west is gradually increasing in size, and at the same time there is an improvement in its character and composition favouring the probability of its being found to be a true tin-bearing lode on further development.—P.S.: The Government Inspector has been underground with me to-day, and seems pleased with our arrangements.

CASHWELL LEAD.—John Peart, October 3: The heading going west in copper hazle continues about the same as last reported, the ore does not set much higher up; is worth 24 cwts. of lead ore per fathom. The heading going east in the above stratum is very poor, not sufficient ore to pay working. The rise in drift top of copper hazle east end is hard, but we are making fair progress. The heading in slatey hazle east end is a little better for ore and a very nice vein, worth 16 cwts. of lead ore per fathom.

CREIGIOG.—H. Hotchkiss, October 6: The character of the lode in the 130, west of Meadow shaft is of the same favourable description as reported to you in my last. Fair progress is being made in the driving.

COED-Y-FEDW AND PANT-Y-BUARTH.—R. Prince, October 8: The only change in the sump below the 112 level, is that the lodestuff has a stronger mixture of blende in its composition, and that the lode itself is gradually becoming wider; both these features augur well for our prospects when we get through into the bearing measures below us. The Cefn Bychan, or main lode, in the 112 west continues to open out. The matrix is of a highly mineralised character, being composed of the carbonate and sulphate of zinc and lead, and congeneal carbonate of lime. There is no change to note in this lode at the 9 level. The 9 west, on the Pant-y-Buarth lode, appears to be getting into easier ground for driving, the lode being more lochy and watery. We are evidently approaching the course of ore worked so profitably by the old proprietors in the levels above. The tribute pitch in the 90 west has a fair show of lead in a very strong lode. The pitch in the 80 level has much improved for lead since my last report.

D'ERESBY.—John Roberts, William Sandoe, October 7: During the past month we have been stoping on the heading lode, chiefly on the south end of the shaft; the ground now is stoped down just level with the bottom of the shaft, and we have now shifted the pump nearer to the best part of the lode, and are now sinking in a lode worth 2 tons of lead to the fathom. The lode here has considerably improved both in appearance and value the last 6 ft. of sinking, and we fully expect to have as good lode as we had above the No. 6, with the advantage of working close to the shaft. On the hanging side we have sunk down as far as we can go with the water, with the result already reported. We hope that shortly the water will be drained again by the sinking of the shaft, when we hope to resume the working there. The lode here seems to be improving going down, but if it only continues its present value we shall have laid open a fine piece of ore ground when the next new level below is brought under it.

DEVON GREAT CONSOLS.—Isaac Richards, October 8: Wheal Maria: In the eastern shaft sinking below the 12, on the Capel Tor lode, the ground is favourable for exploration, and congenial for the production of mineral. In the 12, east of the eastern shaft, on the Capel Tor lode, the lode is 4 ft. wide, composed of capel, quartz, and peach, with small quantities of copper and mundic ores.—Wheal Emma, Railway Shaft, New South Lode: At the 220 west, on the south part of the lode, the drivage is being carried by the side of the lode for more speedy progress.—Watson's: Sinking has again been resumed in the engine shaft below the 124 for another level—the 136—on the south side of the lode; the ground being of a congenial production of mineral, and the lode having increased in width, and having also become more productive at the 112 and 124 than for several fathoms above, it is confidently expected that it will be found still more productive as greater depth is attained. At the 124, and also at the 112, the drivages are being carried by the side of the lode for more speedy progress. In the 44, east of the western shaft, the lode is 2 ft. wide, of a promising character, and is yielding some saving work of copper and mundic ores.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, October 7: The sinking of the engine shaft below the 20 progresses fairly well, without any change of importance during the past week in the value of that part of the lode carried in the shaft—8l. per fathom. In the 20 east end the lode is worth 15l. per fathom, and in the west end at the same level it is worth 8l. per fathom. There being no further lode found in the cross cut north at the 10 fm. level, the driving of the 10 east end has been resumed where the lode is showing signs of improvement, and worth at present 6l. per fathom. The adit east end is without change as to value, but the ground seems somewhat harder, which is a favourable indication.

GAWTON.—George Rowe, October 5: In the 105 east the lode is showing an improved appearance, being 6 ft. wide, composed of capel, arsenical mundic, and ore, yielding 8 tons per fathom. The lode in the 95 east is from 8 to 9 ft. wide, and looking well for the production of mundic, and turning out full 18 tons per fathom. All the stopes throughout the mine remains without change.

GOODEVERE.—R. Knott, October 7: The ground in the deep adit end east has become harder, which has squeezed up the lode, consequently it is not looking so well; these frequent changes I consider owing principally to the shallow and unsettled nature of the ground, and as we advance into the deep ground to the east I have no doubt the lode will be found more regular and productive. Throughout the past week we have had had a continuance of rain, which has made against our progress in connection with the ventilating machinery. We are, however, sufficiently advanced with this work to give it a trial, which we have done, and I am pleased to state that we find it to give perfect satisfaction and a day or so more will put it right, after which we shall have to put a little covering over the belts.

GREAT HOLWAY.—W. T. Harris, October 8: After a thorough examination of all points underground, I find no material change since my last report. I will just say No. 2 continues to yield well, and promising for a continuance. In the 80 east the ground is easier for progress.

GREEN HURTH.—James Polglase, October 2: The bottom end, north of Swan shaft, is worth 12 tons per fathom. Stope in back of bottom level is worth 4 tons per fathom: 44 end north continues poor. No. 1 stope in back of 44 is worth 1 ton per fathom. No. 2 stope is nearly exhausted. No. 3 stope is worth 2 tons per fathom: 30 end north has rather improved, is worth ¾ ton per fathom. Winze below 30, vein unsettled, is worth ½ ton per fathom. No. 1 stope in back of middle level is worth 2 tons per fathom. No. 2 stope in back of middle level is worth 1 ton per fathom No. 3 stope in back of middle level is worth 2½ tons per fathom. No. 4 stope in back of middle level is worth 1½ ton per fathom. The adit level north from new footway; during the week we have broken some excellent lead from this point. We have put up three rises in back of adit level east, the limestone is absent, it is very probable we shall find the limestone in or near the bottom of the level, which we purpose testing by sinking a winze at once. Dressing going on well, and plenty of water for the pumping wheel.

HOLYWELL DISTRICT LEAD.—R. Rowlands, October 8: I have no particular change to record except in No. 3 cross cut the beds are dipping very much, which is a promising indication that we are about to meet with the run of lead in No. 2, and which I am anxiously looking for. The new lode is gradually improving its production of lead.

HEALEYFIELD.—John Trelease, October 2: We have made very satisfactory progress during the past week in every department of the mine. We have placed on the strapping plates to the main rods, and are busy cutting ground for stays and main catches in the Whitwell shaft. We have made good progress in fixing the motion gear of the new engine. We have communicated the foremost north rise to the Smithy level. We had to drive a cross cut west a few fathoms to cut the strings in the Smithy level. The sandstone beds are twisted and curved, and the strings of ore are deposited very irregularly throughout these measures. We find the veins and strings at this point to be over 30 ft. wide; the strings of galena are of good quality, and I have no doubt will again be found in paying quantities in the sandstones below the Smithy level. Our stopes are worth respectively 10, 11, 8, and 9 cwts. of lead per fathom. Our washings have been much retarded this month owing to the scarcity of water, but we have commenced carting the next 45 tons parcel of ore.

MELLANEAR.—John Gilbert, October 7: The ground in the 70 cross-cut, north of main lode, east of Gundry's engine-shaft, is easy for driving, and is letting out a little water and looking very congenial for the production of mineral. The lode in the 110, west of Gundry's shaft, on main part, is 4 ft. wide, yielding 2 tons of copper ore per fathom, and looking kindly to improve. In the 120, east of shaft, on main part, the lode is 3 ft. wide, composed of spar, mundic, and blende, and about ½ ton of copper ore per fathom, but the ground is spare for driving. The lode in the 130, driving east of shaft, on south part, is 4 ft. wide, yielding 2 tons of copper ore per fathom, and some saving work for tin, and presenting a very promising appearance. In the 130, driving west of shaft, on south part, the lode is 4 ft. wide, yielding occasional stones of copper ore, and is worth for tin 6l. per fathom. The lode in the rise in back of the 130, east of shaft, is 3 ft. wide, and yielding 3 tons of copper ore per fathom. In the rise in back of the 130, west of shaft, the lode is 5 ft. wide, and worth for tin 7l. per fathom, and is also yielding some saving work for copper ore. The lode in Gundry's engine-shaft, to sink below the 130, on the north part, is 6 ft. wide and yielding 1 ton of copper ore per fathom, and is going down rather more perpendicularly. We also set 20 pitches to 43 men at an average tribute of 11s. 4d. in 1l.

MID-DEVON COPPER.—James Neill, October 3: Surface: Machinery copes with influx of water to shaft easily; about three revolutions per minute.—A Shaft: The 93 cross cut south was commenced on Monday last, and has been extended 9 ft. 9 in., the strata being composed of capel, hornstone, and garnet, with intervening branches carrying asbestos, chlorite, and mundic; these branches being porous are letting out large streams of water, which, in my opinion, is draining the lode. The drivage is contracted for, and will be forced on with all possible dispatch, having nine men engaged with boring machinery.—C Shaft: The stope in back of cross-cut north from 50 east, worked by three men still yields 2¼ tons of ore per cubic fathom. It is embedded is congenial strata, and from present appearance one would judge that we have a profitable section of the lode now before us. Out of the 1554 tons of copper ore sold at Truro on 17th ult. only 32 tons realised a higher price per ton than the parcel sold from this mine on that occasion.

NEW CARADON.—N. Richards, October 7: No. 1 lode, east of cross course at the 60 fathom level, is still disordered by small crossings, but the ground is favourable for driving in. The lode is at present 3 ft. wide, with two good walls, and more regular than when reported on last week, consequently we hope soon to get a further improvement. The lode west of cross course is over 2 ft. wide, and the character of the same is all that can be desired for the production of copper ore, and doubtless will improve as the level is extended westwards. We are hurrying on the preparations for sinking the Gars shaft as soon as possible. The lodge will soon be completed, when we shall actually commence to sink. We might mention here that the lode we have cut into for the cistern plat shows a very kindly appearance, having a great deal of carbonate of lime as matrix, with a great deal of blende through it. The retimbering of the Gars shaft to which we have made reference will be completed (to the furthest time) by the middle of next week. The last parcel of ore realised 7l. 13s. 6d. per ton.

NEW KITTY.—W. Vivian, October 8: The 20 level, driving east of Thomas's shaft—the lode has very much improved since my last report, and is producing good stones of tin, with every appearance of further improvement. The 40 fm. level driving east is without change to notice. This end is not so far east as the 20.

NEW TERRAS.—Richard Eade, October 8: Our engineers are making good progress in the erection of the engine in the new house. We hope to complete the foundation for the boiler-house in a few days, when the men will then commence clearing the ground for the extension of the dressing-floors. The getting out of the ground for the boiler-house has been a work of considerable labour, as it is over 15 ft. deep, and in a tight rock, out of which we have obtained some stones of very rich tin.

NEW WEST CARADON.—N. Richards, October 7: The new lode in the winze sinking below the 38 will yield 1½ ton of copper ore per fathom We are now rising in the back of the level on this lode, west of cross-course; the lode is 18 in. wide, and will yield from 1 to 1½ ton of black copper ore per fathom.

NORTH TRESKERBY.—Pryor and Son, October 7: Saturday last, the 3rd inst., being our usual setting, we set the following bargains:—No. 1 Lode: The deep adit level to drive east of the deep County adit cross cut, by four men, at 4l. per fathom. This level to drive west of the cross cut, by six men, at 4l. 15s. per fathom. To rise in back of this level, by four men, at 5l. 10s. per fathom.—No. 3 Lode: The deep adit level to drive west of cross cut, by four men, at 4l. 15s. per fathom.—No. 5 Lode: The deep adit to drive west of the cross cut, by four men, at 4l. 15s. per fathom. The deep adit cross cut to drive north of this level, by six men, at 4l. 15s. per fathom; we are daily expecting to cut No. 6 lode at this point.—Highburrow Shaft: The shallow adit level to drive east of the shaft, on No. 1 lode, by four men, at 5l. per fathom.—Snell's Lode: The shallow adit level to drive east of cross cut, by four men, at 3l. 10s. per fathom.—Baron's Engine Shaft: The 36 cross cut to drive south of this shaft, by six men, at 10l. per fathom; the last 3 ft. driving the end has been in the tin lode, which is yielding good saving work for tin, and next week we shall draw to surface a pile from this point to ascertain its value. We may here remark in the old mine the tin and copper lode was frequently within 2 or 3 ft. of each other, which confirms our opinion as to the copper lode cut in the 24 cross cut being the main copper lode. The 24 to drive east of the cross cut, by four men, at 7l. 10s. per fathom. The bargains on the whole are about the same value as when last reported.

PLUSHEYS.—T. Trelease, October 8: We have driven our cross-cut 9 fms. 1 ft. 6 in. during the past fortnight, and have passed through two flookan courses, about 5 fms. apart from each other, and we have now in the east a course of quartz intermixed with mundic and flookan, which I think must be the footwall of the main part of the lode, the two flookans appear to be coming towards the lode going north, and will form a junction if they continue their present bearings. I shall be able to report more fully of the main part of the lode when we get through it.

POLBERRO.—William Vivian, October 8: The mine is without change to notice since my last report. I hope to have a full supply of water for our stamping mills very soon, when our returns of tin will be on the increase.

PRINCE ROYAL.—S. Bennetts, October 2: The killas in No. 1 adit cross cut north end continues favourable for driving, and fair progress is being made. In the No. 2 adit west end the lode is just as last noticed—4 to 5 ft. wide, containing tinstuff more or less throughout, and worth 4l. per fathom, and considering the depth of this end from the surface is a most promising lode.

ROMAN GRAVELS.—Arthur Waters and Son, October 8: We have been underground all through here to-day, and beg to report as follows:—The 125 going north of new engine-shaft is in a lode 6 ft. wide, composed of spar and lead ore, worth quite 1 ton per fathom. The 125, south of said shaft, is in a lode 5 to 6 ft. wide, worth 2 tons per fathom, and improving. The 110 south is worth 3½ tons per fathom. The rise in this level, 7 fms. behind the end, is worth 3 tons per fathom. The 95 south is at present without ore to value, but we think the lode will be wider and more productive shortly. The 80 south is now beyond the big spar lode, and judging from the character of the country rock on both sides of the Roman vein, we think a new shale bunch will be met with as the end goes forward. The stopes generally are just as for some time past. Our sampling to-day is 100 tons lead ore for sale next week.

RUSSELL UNITED.—John Bray, October 8: Since my last report we have driven through 6 ft. of dead ground in the lode at the 57 west at Stephens' shaft. I am very glad to say yesterday and last night we again cut into a better-looking lode 4 ft. wide, with a leading part on the south wall for 2 ft. wide, composed of flookan, prian, gossan, worth 1 ton of black copper ore per fathom. This morning this end is very promising to open out productive. The lode in the eastern end at this level is 3 ft. wide, producing small portions of tin, not to value. The lode in the stopes above the back of the deep adit for 6 ft. wide is producing good tinwork that pays well. We have cut through the cross course in the deep adit level east, which is 5 ft. wide, underlying a little west, composed of quartz, capel, gossan, with mundic, copper, and specks of lead. We shall now drive a few fathoms north on its course to ascertain if the lode is in that direction.

SHEPHERDS UNITED.—J. Prisk, W. Edwards, October 3: Treswean Section: Engine Shaft: We have cleared the choke in the 186 level, and sent the drop lift 3 fathoms below, which we consider will drain as deep as we require for fixing the next plunger. The forking is going on rapidly, and in a few days these extensive mines will be drained within 1 fathom to the 170 below adit, which will be 192 from the surface.—Cunnack's Shaft: The lode in the 24 fathom level is at present rather disordered, consequently is not producing so much tin as when the last report was written; but in looking minutely through the level above we find the ground immediately to the west of the winze is unproductive for 2½ fathoms, which is about the distance we have to drive before we commence rising. The lode in the winze referred to is 5 ft. wide, worth 25l. per fathom for its length (9 ft.), but the late heavy rain has so increased the water that the progress in sinking has been slow. We shall, however, do our best to keep it going, as by sinking we are laying open valuable tin ground. We are burning and dressing for the next sale of tin, which will be made at the usual time, and all the machinery is in good condition and working well.

— Capts. W. Argall and T. Job, October 3: Mounts Bay Section: The lode in the 20 fathom level driving east of Pengersick shaft is worth about 2l. per fm. The rise in the back of this level is worth 6l. per fathom. The winze sinking below the adit level is worth 3l. per fathom, and improving. The tribute pitches throughout the mine are producing their usual quantity of tin. In the coming week we shall sell our monthly parcel of tin.

SHEPHERDS UNITED.—W. Skewis and T. Doidge, October 6: East Wheal Rose Section, Penrose's Shaft: The water is drained and the shaft cleared and repaired to the 150, which is the bottom level at this part of the mine. The shaftmen are now employed in casing, dividing, and putting in permanent footway from the 90 downwards. We are pushing on this work as fast as possible, so as to get the shaft in order for drawing purposes, and clear out the stuff from the bottom level and open up the latter for the working of east and Middleton's lodes.—Baynard's: We are pleased to say that good progress has been made here during the last fortnight. This shaft is now cleared and repaired to the 140. We shall now proceed to clear the latter plat and level and to open up a communtcation with Penrose's shaft at this depth, which we hope to effect by the end of the week. After this we shall clear the shaft from the 140 to the 150, which is the bottom; and if the shaft in these 10 fms. is found in such repair as the last 10 fms. passed through we hope to reach the bottom in about three weeks from this date. We shall then have two shafts in communication with the bottom of the mine.—North-West Rose: The drawing gear and shaft tackle here are completed, and we are now drawing stuff with the engine from the 130 of the underlie shaft. We shall proceed to clear the remainder of the 130 cross cut between the underlie and downright shafts, so as to effect a communication between them and make water-way for the water to flow to the downright shaft, which will be pumped from below the 130 in the underlie shaft. All the pitwork and other machinery are in good working order.

SOUTH CONDURROW.—William Rich, William Williams, H. King, October 7: The lode in the 54, west of Marshall's, yields a little tin The 66 end west is unproductive. We are putting out a cross cut south in the 93, as we think the main part of the lode is standing in that direction. The lode in the 93, east of King's, is worth 10l. per fathom. The 80 end east is worth 7l. per fathom. Two stopes in the back of this level are worth 8l. and 10l. per fathom. The 80 end, west of Plantation shaft, is worth 6l. per fathom. The 70 end east is worth 8l. per fathom. The stope in the back of this level is worth 9l. per fm. The 60 east is worth 9l. per fathom. Two stopes in the back are worth together 18l. per fathom The 50 end east is worth 7l. per fathom. Three stopes in the back are worth 28l. per fathom in the aggregate. The 40 end east yields a little tin. The stope in the back of the 40 is worth 10l. per fathom.

SOUTH DARREN.—John Mitchell, October 8: The very heavy rains we have had this week have drowned out the shaftmen from the 142 end, and also the winze men from the 130 west, there being now 3 ft. of water in the 130 level. We have put the shaftmen to stope in the 120 fathom level, west of shaft, until they can get into the bottom end again. This stope is worth about 13 cwts. of silver-lead ore per fathom. No. 3 stope in the 130 west is worth 15 cwts. of silver-lead ore per cubic fathom. No. 4 stope in the same level is worth about 13 cwts. of silver-lead ore per fathom. The stope in the 120 east is worth 1 ton of silver-lead ore per fathom, and the western stope in the same level is worth 18 cwts. of silver-lead ore per fathom.

SOUTH TOLCARNE.—October 6: Flat Lode: The 70 east on this lode is being driven by six men, at 12l. per fathom. At this point the lode is cut through, being 16 ft. wide; it is still of a most promising character, but as yet not producing tin enough to value, but we are looking forward to a great improvement at the junction, which we hope is not more than 8 fms. further east.—Gossan Lode: In the 46 east the lode is getting harder; it is producing tinstuff of saving work, and some copper.—Taylor's Lode: In the back of the 24 the lode is worth 4l. per fathom. The lode in the back of the 12 is worth 15l. per fathom. In the winze below the mid-level the lode is worth 5l. per fathom. The new stope below the adit level is looking well; worth 10l. per fathom. In the winze sinking below the adit is a fine masterly lode, producing a little tin. It is very much improved since we commenced to sink, and no doubt from present appearance we shall have ere long a valuable lode. No change elsewhere.

STANDARD LEAD.—W. H. Borlase, October 8: The lode in the 45, south of new shaft, is again improving, now producing 20 cwts. of lead and blende per fathom. The winze in the 33 is suspended, the water being too quick for sinking, but I hope the level below will unwater it shortly, when it will be at once resumed. The lode was looking rather better when we stopped than it was last week, then valued at 2 tons per fathom. The 23, south of junction, has also improved, forebreast bursting with water, and producing fully 10 cwts. of lead per fathom; a very promising point. The new winze sinking below the 23, west of junction on the east and west lode, is looking well, producing 2 tons of lead and blende per fathom, and promising to improve. I am preparing to clear out and start to drive the 33 to come under this winze, and seeing we have such a promising lode in the winze the prospects before this end are very good. The late incessant rains have thrown a quantity of water into the engine-shaft; this with the breaking of the bottom valve of the plunger last night has stopped the work on the east and west lode at the 45, and will necessitate the stopping of crusher for a few days until we can fork the water below the level again.

SNAEFELL.—J. Kewley, October 8: The lode in the 100 end north heaves round to the east again and produces a little blende. The hanging part of the lode is very hard and spotted with lead. We do not know the exact size of the lode, as we have a portion standing on the east side. We are now driving the end with the rock drill. The men are still securing ground in the rise from the 130 fm. level, and running out stuff. The arch over the river is finished, and the masons have started with the magazine. The men are quarrying out for foundation in front of the river for the new turbine house, and cutting out tail race.

TREVAUNANCE UNITED.—William Vivian, October 8: The 55 Cross-cut, South of the Eastern Shaft: We have intersected the copper lode at this point, which is of a very promising character, and producing good stones of copper ore.—The 55 driving East of Engine Shaft: Lode producing stones of copper ore, but not to value at present.—The 55 driving West: We have a very promising tin lode.—The Engine Shaft: We are now about to fix a plunger lift at the 50; we have about 6 fms. more to complete the cutting down of the shaft to the 60.

TOLGULLOW UNITED.—George E. Tremayne October 8: The lode in the 80 driving west of Trefuse's shaft is 3 ft. wide, composed of arsenical mundic and tin ores, and worth 12l. per fathom, and very promising for an improvement. Two stopes in the back of this level are each worth for tin and arsenic 15l. per fathom. In the back of the 65, west of Paul's shaft, we are at present rising a little to the north of the lode to effect a more speedy communication with the bottom of the 50; when communicated it will give good ventilation in this part of the mine. Two stopes in the bottom of the 65, west of Trefuse's shaft, are worth for tin and arsenic—No. 1 20l. per fathom, and No. 2 15l. per fathom. The lode in the deep adit level driving west of Broad's shaft is 2 ft. wide, producing good saving work for tin, with great promise for an improvement; this end will soon reach the good run of tin ground driven through in the level above. The lode in the mid adit level driving west of Broad's shaft is 3½ ft. wide, and worth for tin 15l. per fathom. Three stopes in the back of this level are each worth for tin 12l. per fathom. The lode in the winze sinking below the shallow adit level, west of Broad's shaft, is at present a little contracted, which we regard as only temporary. It is at present 2 ft. wide, and worth for tin 10l. per fathom When communicated with the rise from the back of said adit will give good ventilation, and lay open good tin ground for stoping. We sold on Friday last 11 tons of tin, realising 534l. 1s.

VAN.—W. H. Williams, October 8: The 150 cross cut, south from Edwards' shaft, is driven 40 fathoms, and I hope, all being well, to see the lode at the 150 in about another three weeks. Until that is accomplished I am hardly in a position to make recommendations as to future steps. I can only say at present that if the lode is found as rich at the 150 when intersected as it is in the hanging of the winze sinking below the 135, at a point 30 fathoms east of Edwards' we can do nothing better than use all speed to communicate the 150 with the winze in order to secure ventilation, and lay the ground open ready for stoping the cross cut is set to nine men at 100s. per fathom for driving, an 4 20s. per fm. for clearing and tramming the stuff as the distance is rather long to the shaft, and takes a good bit of their time when they should be boring.—The 135: The winze from this level to the 150 is in full course of sinking at 100s. per fathom for sinking, and 80s. per fathom for winding and delivering their stuff and water at the 120. The lode in the hanging of the winze, so far as we are able to judge, is of precisely the same character and value as we reported last week. You will please bear in mind that we are sinking in the flookan in order to save time. I have no change to report from any other part of the mine, except that No. 1 stope in back of the No. 1 stope has been lowered this month to 2s. 3d. per team. Stope in back of the No. 1 stope has been lowered this month to 2s. 3d. per team. This is a very hard stope, but produces good ore, chiefly steel ore, and is worth 45 cwts. per cubic fathom. Everything at surface is going on regularly. Our harvest is, I am glad to say, all safely harvested in good condition.

WEARDALE.—James Blenkiron, October 3: Greenlaws: No change to note in Jackson's level.—Lowe's Drift, West: The end is looking more promising; vein 18 in. wide, composed of kindly fluor spar and elder, with a little ore.—Killhope: The new engine is completed, and pumping has commenced. We are lowering the water at the rate of 4 to 5 ft. per hour; we expect to have the water cleared out on Monday, and we propose commencing sinking forthwith. We hope soon to lay open and develope a rich and profitable mine here.—Groverake: The tribute pitches throughout the mine are looking promising. We propose commencing several more partnerships on tribute at our setting next week.

WEST CARADON.—N. Richards, October 7: We have suspended the working on Gilpin's lode, and two of the men are now sinking in the bottom of the 38 on No. 5 lode which will yield from 1½ to 2 tons of good ore per fathom. The other men are at present engaged taking out air pipes, ladders, &c., from the 50 where they are not wanted, and bringing them to surface.

WEST GODOLPHIN.—T. Hodge, Frances Hodge, October 6: The 92 west, on Bellingham's, is advancing with good progress; there is no change to report in the character of the lode, neither do we expect much improvement until we are under the winze coming down from the 80, and about 9 fathoms ahead. The winze below the 80 west, on Bellingham's, is resumed; the lode in the bottom is improved, and worth to-day 15l. per fathom. The stope below the 80 west, on Pink lode, is also improved, and worth 25l. per fathom. Our prospects in the bottom of the mine, on Bellingham's and Pink lodes, are much improved since the meeting, and to show you the quality of the stuff from both points we have dispatched to the London office a sample box of each.

WEST KITTY.—William Vivian, October 8: In the 84 fm. level, driving east No. 1 rise, the lode is worth 12l. per fathom In driving east of No. 2 rise the lode is worth 14l. per fathom. In the rise in the back of the 84 fm. level the lode is worth 9l. per fathom. In the 60 fm. level, driving west of cross cut, the lode is producing stones of tin, but not to value. In the 50 fm. level, driving east of No. 3 rise, the lode is worth 15l. per fathom. In the 40 fm. level, driving east of No. 1 rise, the lode is worth 15l. per fathom In the rise in the back of the 50 fm. level, the lode is worth 12l. per fathom We have six stopes working, which continue to produce the usual quantity of tin.

WEST WHEAL PEEVOR.—Joseph Pryor, October 8: We cannot speak of any particular change in any of the points of operation in this mine they being of the same promising character as last reported.

WHEAL CREBOR.—Henry Phillips, P. D. Holman, October 6: The lode in the 156 driving east of new shaft has a very promising appearance still retaining its size and character, yielding arsenical mundic and good stones of copper ore. No lode has been taken down in the 144 driving west of new shaft since last reported. Our stoping ground throughout the mine will yield in the aggregate 56 tons of copper ore and 20 tons of mundic per fathom. All other points are without change.

WHEAL GRENVILLE.—T. Hodge, October 6: In the 205 level east end the lode is worth 6l. per fathom. The 178 east end is worth 8l. per fathom. The 165 east end produces stamping work of low quality. The winze below said level is worth 12l. per fathom. The stope in the back is worth 18l. per fathom. The 150 east is rather improved since my last, worth 10l., and looks promising to still further improve. Three stopes in the back of said level are worth together 70l. per fm.—Pease's Shaft: The 165 west end is worth 6l. per fathom. The 150 west end is worth 7l. per fathom. The 140 west end is worth 12l. per fathom, and improving. The 120 west end is worth 8l. per fathom. No other changes. We shall sell our usual quantity of tin on Thursday next.

WHEAL METAL AND FLOW.—William Argall, S. P. Curtis, October 7: There is no change of importance in Watson's shaft on Metal lode. We expect to put 20 dead frames to work the latter part of this week, we are also preparing 30 more. The eight heads of steam stamps will go to work in the next fortnight, we have five pulverisers at work; after our tin sale next week we shall increase our returns of tin.

WHEAL PEEVOR.—Joseph Pryor, T. C. King, October 8: We cannot speak of any particular change in any of the points of operation on this part of the mine since the last report.—Peevor Bottoms: We are pleased to say that, in consequence of having ground in three sides of the shaft, a little more progress is now being made in clearing it; we have still, however, the run in the north side of the shaft to contend with and secure, and this we are doing as fast as possible. We have not as yet been able to examine any levels, but have been through some of the old workings, and judging from the ground taken away, and also from some samples we broke, they were evidently very productive. We are pushing forward this part of the mine as fast as possible, and are daily hoping to find a level when more extensive searches will be able to be made, and with, we hope, satisfactory results.

## FOREIGN MINES.

ALMADA AND TIRITO.—John Clark, September 4: Providencia is looking well, and giving some black and green ore. Six drillers are working at this point.—Virgen: We have been timbering and getting this mine in good shape to go after the old workings, and we have started to rise, and I think we shall soon strike the point. Four drillers and two timbermen are working here.—Cruz Verde: We have the winze down about 53 ft. Since last report the lode has made as wide as 6 ft. and we have started to drive a drift north; we have ore in the drift but it is changeable. The drift has a good appearance. Four drillers are working here by contract. In other parts of the mine there is no change to note. Everything is going along smoothly.

COLORADO UNITED.—Colonel Baldwin, September 17: In the 14th level east we are nearly under the winze, which is sunk to a depth of about 30 ft. below the 13th level at a point 265 ft. east of the main shaft. The heading of this level now shows a vein 3 to 4 in. wide, well-defined, and well mixed with mineral. The indications of a solid ore vein at no great distance are very good. I am now taking the water out of the winze below the 13th level, and shall sink it down to the 14th as soon as possible.

— Colonel Baldwin, September 19: 14th level east driven during past two weeks 13 ft.; total distance driven 260 ft.; cost per foot $12 38. The mineral in this level is steadily increasing. Judging from present appearances I think we will soon reach solid ore. I am now sinking the winze below the 13th level. From the top of the winze to a depth of 19 ft. I find a vein of solid mineral averaging 3 in. in width. For the next 10 ft. (the winze being now about 30 ft. deep), the mineral is scattered, but in the lower 10 ft. the vein of solid mineral appears again, and continues to the bottom, where it is 5 in. in width. The entire vein in the lower 10 ft. of this winze, without any sorting, averages 93 ozs. of silver per ton. Cross cut north from 12th level driven during past two weeks 11 ft.; total distance driven 95 ft.; cost per foot $16. On account of missed shots, we fell 1 ft. below the mark in driving, but this was the misfortune rather than the fault of the drill men: 12th level west driven during past two weeks 7 ft.; total distance driven 26 ft.; cost per foot $9·25. Size of vein 1 ft.; quartz, gangue, and a little scattered mineral. No change since last report; $9·25 per foot is exclusive of hoisting, sharpening, moving rock, &c.: 11th level west driven during past two week, 7 ft.; total distance driven, 91 ft.; cost per foot, $9·25; size of vein, 10 in. No change since last report. My contractors in this level got careless and dishonest about saving the ore, and I discharged them. I have put two men at work by the day for the present but hope soon to have a power-drill in their places.

DEVALA MOYAR GOLD.—J. Williams, September 11: I am pleased to say the weather continues fine, and has enabled us to push rapidly forward with our work. Sufficient sleepers have now been cut to complete the tramway, and brought out from the jungle near to the spot where they will be required. The tram rails are nearly all on the mine, so that we have no lack of materials to carry out the work before us. 1500 ft. have now been completed, with the exception of a little packing, which will be necessary when we go over the road again after it is settled to its proper bearing. The ground, so far, has not been bad for cutting; but we see some large boulders on either side of us; these will, however, be avoided, if possible.—Salomon's Reef: The 600 ft. tunnel, driving into the hill, is running in an easterly direction, twisting it appears at present with the shape of the mountain everywhere it is seen. A very hard gneiss lies embedded under the reef, which accounts very often for its irregularity. At the present time this tunnel is unproductive; but I imagine this is only temporary. This is a very important point in the reef, and we are not at all discouraged in seeing it fluctuate. It is being carried on with all activity by six men, and we intend to push forward this tunnel to prove the ground. The 500 ft. tunnel is very regular, and varies but little in character or size—from 4 to 5 ft. wide—and the ground ordinarily easy for driving. Abundance of quartz is opening up by this level, and is kept separate for trial crushings. The 400 level has much the some appearance as the 500, but shows a little better on the washboard, and,

although it lies flat, as is usual for lodes in this district, it looks exceedingly promising. We have no observable alteration in the 300 ft. level, which is producing quartz of the same quality as for some time past. A 200 ft. level has been started; but the reef is so flat that there is scarcely any difference in the elevation of this and the 300; this will soon be proved, as it is our object to communicate the two points for opening and stoping ground. The rise in back of the 300 ft. level is improving in appearance, and we are looking forward to a better run of quartz than has hitherto been seen here. This rise is quite a speculation, going as it is up into all new ground never worked on before, only a few pits having been sunk, scratching over the surface 300 ft. above it.—Harewood Reef: We have no sign of the bottom of the old workings as yet. I went down the shaft yesterday, and the lode going down does not appear to decrease in size in the least, quartz being all around. The Korumber, who is employed to test the different bargains with the wash board, every day washed four pans from this shaft, and every one of them produced a show of gold, and it does seem strange that as all the reefs contain a small amount of gold, nothing really good has yet been met with. I would wish to keep before you that you have no less than seven tunnels and a shaft sinking on the course of the reefs, that they are opening up a considerable quantity of ground, and that we may at any time meet with better results. We hope to finish overhauling the engine and the tables at the mill in the coming week.

DON PEDRO GCLD.—Mine Report for August: Works for Produce: Walter's level has been advanced 46 ft., and continuing in crushed low grade material, the force has been employed to open a stope upon the branches and layers of auriferous jacotinga encountered the latter part of last month near the line of the small ravine ascending from the entrance of Hickie's level. In the stope an excavation extending 20 ft. northward from Walter's level by 15 ft. wide, an old inclined drivage, collapsed, was first passed, and north of this some good lody matter has been met with, which promises to give better results than latterly obtained if it continues intact descending eastward.—Corrego: The deposit of sand beneath the old aqueduct continues to be treated by a small force. —Works for Development: Gordon's Shaft: The necessary enlargement at the bottom of the shaft for pulleys to turn the power transmitting rope in the direction of the permanent incline, is in an advanced state, and two sets of timbers have been placed in position to complete the entrance of level to connect with the latter inclined shaft—the drivage last mentioned being about 4 ft. below water level, the height at which it is dammed back into the mine by collapse of the adit. A small hand pump has been fixed, and is very nearly complete with pipes for draining the water now requiring to be hoisted by horse whim.—Adit Level: The side drivage having taken the water away from the crush, the temporary repairing of the straight level has been advanced 12 ft. beyond the point of communication, making a total distance of 912 ft. open from the entrance. The ventilation here during the most heated part of the day is again getting imperfect, and we contemplate assisting this by some economical appliance.—Pumping Machinery: The tunnel for turbine tail race has been advanced a further distance of 45 ft., leaving about 40 ft. to complete the drivage to site of the vertical shaft for turbine tail pipe.—Produce: From explorations amounts for the month to 476 oits.

INDIAN CONSOLIDATED.—Mr. Henry Lyon, August 31: Phœnix Section: Summary of mining work ending August 31: No. 1 Level, North Drive: Distance driven during the month of August 8 ft., making total length driven from cross cut 259 ft.—No. 2 Level North Drive: Distance driven during month of August 28 ft., making total length driven from cross cut, 498 ft. A report has been received from Mr. Lyon, giving the result of crushing 388 tons of quartz, which gave 1 dwt. ½ gr. of gold per ton; this was stone which had to be cleared away, and it is shown that it yielded a profit on the actual cost of hauling and crushing.

— September 4: I start again on Monday with a staff from the upper stopes, and which gave during the last campaign 4 dwts. 13 grs. per ton.

— September 11: The lode in the No. 2 is again opening out, but it is not yet sufficiently defined to say much about it. A similar remark applies to No. 1 north drive. The stuff from upper stopes continues to look well, and we have been crushing this stone steadily since the morning of the 7th inst. A leader of quartz appears in the upper drive (tramway tunnel), and I hope we shall soon find the lode here.

— Captain Sheridan, September 6: Colar Section: No. 3 Shaft: Since my last report we have finished repairing, and squared the shaft to the bottom. We started to sink at the bottom last night, and I find we are in a very hard bar of country, but by the appearance of the ground in the cross-cut we ought soon to get in better sinking country. The pumping engine is working well, and keeps the water in fork, going at a speed of eight strokes per minute.—No. 5 Shaft: I find that the water drained very slowly from this shaft—in fact, the water does not drain between 78 ft. from the surface. We will try and arrange to drain it as soon as possible. As soon as I can get the shaft dry I will sink it, as by surface indications there seem to be extensive native workings here.—Main Shaft: This shaft has been sunk steadily for the fortnight by native labour. Six men and one maistry in a shift, in all 21 men, working three shifts. They have sunk for the fortnight 4 ft. 6 in., making a total of 74 ft. 4 in.—The No. 4 Shaft: I find that this shaft is drained within 2 ft. of the bottom, or 100 ft. from surface. I have started men on at this shaft to prepare to drive to the old workings. We will not have far to drive, judging by surface indications. If we can strike the old men's workings at this depth we will be able to see for ourselves the best and quickest way to prove the property.

— G. J. Bawden: At No. 3 shaft the engine and pitwork are working very satisfactorily. The engine, which is in first class condition, is running the bucket about eight strokes per minute, is keeping the water at this shaft, and draining all the others. The air compressor is now approaching completion The receiver has arrived, and is fixed; the fly-wheel arrived on Saturday is put together, and will be in position this week.

MYSORE GOLD.—B. D. Plummer, September 12: Mining Operations: Taylor's Shaft, 296 Ft. Level: The lode in the north end is 7 ft. wide; the quartz is rather whiter than usual, and we do not think it is quite so rich in gold. We think, however, it will improve in quality as it is extended north.—The 296 South End: The lode is 4 ft. wide; it is much tighter to cut than in the north end, and the speed is not so good. It is, however, thought that the quartz is richer than the north end. The assay value of the two mixed is 7 ozs. 10 dwts. 15 grs. In the winze in the bottom of the 236, south of Taylor's shaft, the lode is 4½ ft. wide, very good looking quartz; assay value, 2 ozs. 16 dwts. 8 grs. In the stope in the back of the 236, south of Taylor's shaft, the lode is 3 ft. wide; assay value 4 ozs. 5 dwts. 16 grs. The 236, north of Taylor's shaft, stoping and sinking by 13 Italians; very fine strong lode, 5 ft. wide, assay value 6 ozs. 7 dwts. 9 grs. In the 236, north of shaft, cross cut driving from the west to the east lode, the ground is tight and spare for cutting, and the progress is slow. The 236, north of Taylor's shaft, the ground cutting for tackle previous to sinking below No. 1 winze is nearly completed; we hope to start the sinking next week. The 173 south end, on west lode, is still in old workings: it has to be close timbered; we are using all the efforts we can to advance the level. Ultimately it will be holed to Plummer shaft. We look forward to this communication with interest, as we hope it will pass such a current of fresh air through the works as to reduce the present high temperature of the mine. In the 173, the works as to reduce the present high temperature of the mine. In the 173, No. 4 winze, north on east lode, the lode is 2½ ft. wide, promising looking quartz; assay value, 1 oz. 12 dwts. 16 grs.—Plummer Shaft: During the past week we have had a large band of compact quartz in the bottom of the shaft, which required to be blasted; the speed, however, has been satisfactory, 7 ft. was sunk; the depth of the shaft is 14 fms. 3 in

NEW CHILE.—Richard Pearce, August 31: Cinecero: No. 4 Shaft: The shaft is down 102 ft. below No. 10 level. Driving No. 7 drift shows the lode in the back 2 ft. wide and of good appearance. We have driven 10 ft., and the end is 284 ft. 6 in. from shaft. By the end of next month we expect to hole this drift to the old Potosi air shaft (in the bottom of which I can recollect the lode is 6 to 8 ft. wide), and thus ventilate this mine, and enable us to resume work in the shaft. The end of No. 50, west drift, is 276 ft. 6 in. from shaft, and shows the lode 6 ft. wide. Stope in the back of this drift is 213 ft. from shaft, and has been stoped 10 ft. during the month. The lode is about 20 in. wide, and in the bottom of the stope shows a little gold. The 9 west drift has been driven 19 ft., and the end is 369 ft. from shaft. During the last two weeks the lode has been decreasing in width from 6 ft. to 2 ft. 6 in., though it has very much improved in quality. The end of No. 10, east drift, is 127 ft. from centre of shaft, and shows the lode mixed up with blue stone, and of no value. We have driven 21 ft. during this month. Stope in the back of this drift is 100 ft. from shaft, and has been stoped 25 ft. 6 in. Lode averages 2 ft. in width, and good milling rock. The 10 west drift is 131 ft. from shaft, and has been driven 26 ft. during this month. The end shows the lode 2 ft. wide, which is the best rock now in the mine. The stope in the back is 57 ft. from shaft, and has been stoped 14 ft. 6 in. during this month. For 35 ft. up this stope the lode is 5 ft. wide and of inferior quality, but above this up to the foot of No. 9 drift there is a small lode which, though mixed up with flookan and stringers of quartz, is of fair milling quality. No. 10½, east drift, is 37 ft. from shaft, and the end shows the lode 22 in. wide and of good quality. Drift 10½ west is 39 ft. from shaft, and has been driven 15 ft. during this month. Lode in the end 4 ft. wide and fair quality. No. 11 drift, east and west, we will commence to drive to morrow, and also to cut ground for the plat. —Austin No. 9, No. 5 Shaft: The shaft is down 62 ft. below the two drifts east and west, which we have started 51 ft. from surface. We have sunk 20 ft. during this month, and the bottom shows the lode 214 ft. wide, and of good quality. We will now sink with energy day and night. Drift east 51 ft. below surface is 27 ft. from shaft, and shows the lode in the end 4 ft. wide, and of good appearance. Drift west is 27 ft. 6 in. from shaft, and shows the lode 2 to 3 ft. wide, which is of promising character.—No 1 or Water Shaft: I will again impress on your minds the desirability of continuing explorations in No. 1 shaft. The depth of the shaft is 326 ft., and the lode in the bottom 2 ft. 6 in. wide. I am convinced that as all the rich shoots of ore in Cinercero, as I know from experience in Potosi, are dipping westward, we must meet with profitable ground (not inferior to any yet produced by the Chile Mine) at a greater depth.

NEW EMMA SILVER.—Alta City, Utah, September 19: Progress for the week in east level, 16 ft.; total distance from cross-cut, 286 ft. No change to report. Seam continues, and appearances about as per my letter of 12th inst. West level extended 10 ft.; total distance from shaft, 17 ft. Rock somewhat softer, and filled with mineral stains carrying oxide of iron, and is looking favourable.

NEW HOOVER HILL GOLD.—Briol's: Sinking the shaft below the 230, the ground continues tight, and there is no change to note in the appearance of the vein. In the winze below the 230 north we have cut into some nice looking quartz of fair grade; the vein, however, is considerably broken up and disordered at this point.—Hawkins': In the winze being sunk on the No. 1 orebody the ground has become easier, and there has been an improvement in the grade of ore, which is now worth $10 to $15 per ton in the bottom. The No. 2 orebody is dipping away in a chimney like form to the north-east, and is being followed by a winze in that direction, the ore in the bottom is worth about $15 per ton. The cross cut west of the open cut shaft at 40 ft. is being continued. The ground is easy for driving, and we are making good speed.

HUNDYDROOG GOLD.—B. D. Plummer, September 12: Mining Operations: Webb's shaft is drained; sinking will be recommenced on Monday, and it is to be hoped that satisfactory speed will be made in the deepening of the shaft; but seeing that no work has been done in this place for the last eight or ten days, there is nothing new to report.—Taylor's Shaft: The work in connection with this shaft, on the course of the lode, continues to be satisfactory; it has to be closely timbered from the point of contact with the downright shaft to the 98. We expect to get this done in about four weeks' more. So far, the work is well and strongly done, and we shall be ready for the sinking of Taylor's shaft below the 95 much sooner than it is possible for the engineer to complete his part of the work. Up to this time all has gone on to my entire satisfaction.

PESTARENA UNITED.—William Roberts, William Roberts, jun., October 1: No. 1 Lode: The ends north and south in the 150 fm. level are being driven in the country rock on the hanging-wall of the lode, which carries a little black shale, but gives no ore to value. The end driving north in the 140 fm. level carries a good wall, but has no ore. It has been suspended for the present, and the men set to cut into the western side on a branch to see if any ore stands in that direction. The end driving south in the 140 fm. level has fallen off in yield. The lode is still big, chiefly of quartz, but carries little pyrites. It produces 8 tons per fathom of 4 dwts. per ton. In the end driving north in the 130 fm. level the lode has become more contracted, but is more compact, and yields 4 tons per fathom of 20 dwts. per ton. In the end driving south in the 130 fm. level there is no change to note from the hard massive rock, and progress here is slow. In the end driving south in the 110 fm. level the lode is rather narrow in the bottom, but it still holds wide in the roof, and carries more pyrites than formerly. It yields 8 tons per fathom of 11 dwts. per ton. In the end driving south in the 100 fm. level the lode is at present small, and rather disordered. Having discovered a branch going off in the western side (20 centimetres wide of rich ore), the men are put to strip down on this for a few days to ascertain its value. Its present yield is 2 tons per fathom of 7 dwts. per ton. In the winze sinking under the 110 fm. level south, to all appearance, the lode and branch are separating again, the lode taking off in the western side, which carries a good wall but no ore, whilst the branch, although a little smaller, is strong, and carries good patches of pyrites. It yields 10 tons of per fathom of 10 dwts. per ton. In the winze sinking under the 130 fm. level south the two branches have united in the north end, which has formed a body of quartz, with pyrites thinly scattered throughout, and bids fair for improvement. It produces 8 tons per fathom of 6 dwts per ton.—No 5 Lode: The winze sinking under the 90 fm. level north, owing to the great quantity of water, and for convenience of sinking, has been suspended, and a drive started north (which will be the 100 fm. level) to get in over the rise, where another winze will be started to communicate with the rise from the 110 fm. level. The end driving north in the 110 fm. level has a great width of lode in the roof, but narrows somewhat in the bottom; it carries two good walls, and has an improving appearance; it yields 3 tons per fathom of 8 dwts. per ton. The intermediate level over the 65 fm. level south has a small compact lode wall charged with pyrites; yielding 5 tons per fathom of 13 dwts. per ton. The intermediate drive over the 90 fm. level south has a quartzose lode, with pyrites scattered throughout, and produces 7 tons per fathom of 9 dwts. per ton. The intermediate drive over the 130 fm. level, south of No. 1 lode, is a trial drive to see if any ore exists between the two levels. Its present yield is 4 tons per fathom of 8 dwts. per ton.

— October 3: William Roberts, H. J. Gifford: Val Toppa District: In the end south in Zero level the ground is not quite so close as formerly, and is letting out a little water. In the end south on eastern branch in the intermediate level under Zero; the lode in the middle is squeezed every small indeed, owing to a contortion of the strata; but it is found to open out in the back of the level, and also holds down in the bottom. It yields 4 tons per fathom of 8 dwts. per ton. In the cross cut east from the intermediate level under Zero the lode is irregular, but carries good patches of ore. In the bottom of the level a sort of saddleback is found, and the ore seems to take down along side of this, as it used to on the flat lode; in fact, from the direction it would seem to be a sort of continuation of the flat lode. Its present yield is 6 tons per fathom of 10 dwts. per ton. In the end south an eastern branch in No. 1 level a large flat body of ore continues along the slide, and is gradually rising. It produces 35 tons per fathom of 3 dwts. per ton. The end north from cross cut east at No. 1 level shows rather more quartz than usual; but there is no regular lode, the rich pieces of pyrites and galena being mostly interstratified with the schist. It yields 8 tons per fathom of 30 dwts. per ton. In the rise in back of No. 1 level, south of cross-cut, there is no lode, but a flour carrying soft decomposed schist takes off flatly on the eastern side, and it is hoped the lode will be found heaved on that side. The gold returns from the Pestarena United Mines for the month of September were as follows:—From Pestarena District 273 ozs. 11 dwts. 2 grs. from 626 tons of ore, equal to 8 dwts 21½ grs. per ton. Val Toppa: 180 ozs. 5 dwts. 10 grs. from 338 tons, equal to 10 dwts. 16 grs. per ton; total, 458 ozs. 16 dwts. 12 grs. obtained from 964 tons of ore amalgamated, showing an average yield of 9 dwts. 12½ grs. to the ton.

PORT PHILLIP AND COLONIAL GOLD.—Report of the progressive work done in the mine during the past six weeks:—North Shaft: Preparations are now being made to resume sinking this shaft, and expect to be ready to commence doing so on next Monday week, with one set of men.—No. 13 or 1130 Ft. Level, Western and Robinson's Lodes: Both these continuing poor, they have been stopped for the present.—Intermediate Level, Western Lode: Between Nos. 13 and 11 levels very little driving has been done either north or south of No. 3 winze for the last six weeks, and the stone has been poor. The tributers are now cross-cutting the lode for another splice of stone to the west, and expect to get better stone shortly. The width of the lode, as far as driven through, is 27 ft. The tributers are still getting good stone 80 ft. below the No. 11, or 990 ft. level, western lode; width of lode 7 ft., and good to work. The drive in No. 10 ¼ level, on Old Man's lode, south from the winze, in Section 10, is in a distance of 90 ft.; width of lode, 3 ft. 6 in. The stone has been poor so far; we are now putting up a rise, and expect to get better stone shortly. In No. 8, or 690 ft. level, on Old Man's lode, the tributers are still getting payable stone from the Yankee ground; width of lode 4 ft., and good to work. On the same level and lode a drive south has been commenced in Section 1 by the company; stone looking payable. In No. 5, or 444 ft. level, on Western lode, the tributers driving north of the cross cut, in section 1, have been getting poor; but it is improving in appearance, and they expect better yields shortly. In No. 3, or 300 ft. level, on Robinson's lode, a party of tributers have commenced to drive north of the cross cut for a block of stone left some time ago. All the underground works are in good order.

— Aug. 24: Clunes: Total quartz crushed for six weeks ending Aug. 5, 1903 tons; total gold obtained, 462 ozs. 18 dwts.; average per ton, 4 dwts. 19 grs.; receipts, 1935*l.* 16s. 11d.; payments, 2318*l.* 4s. 9d.; loss, 381*l.* 7s. 10d.

QUEEN OF THE HILLS.—W. S. Godbe, September 16: I much regret my inability to communicate anything of an encouraging nature, except, perhaps, the fact that we are doing our utmost to preserve the property of the company in tact, and at a merely nominal outlay. With the exception of a trifling sum occasionally received for the working of the slag dump at Rust Lake, no income is received, so that the cost of working the Silver King, small as it is, constitutes a charge at Wells, Fargo, and Co.'s against the company, at the present time, of nearly $1000. As to the result of the work done upon this mine, I cannot do better than to quote from a letter just received from Thomas Mackinson, the man who is still working there under contract:—"I run a cross cut of 5 ft. on the streak of ore that I told you of a week ago. It ran to the foot-wall and then cut off. The face of the drift is now out of the break altogether. We are now running on the contact in natural ground with a footwall of quartzite and a hanging-wall of black lime, with a vein of 2 ft. of ledge matter between walls. I think now we are out of the broken ground, and when we find any ore it will stay with us. In the upper level the ground is safer and the air better, but it is the company's interest to run the bottom level. We have no ore in the drift now, but it is very much stained, and liable at any time to come to ore, as we have cut through a piece of barren ground over 145 ft." This level is over 400 ft. deep, extending westerly 145 ft., and if we find ore there, as expected, it will greatly enhance the value of the mine. There is some probability of selling this portion of the company's property, but only at a moderate figure. At the present unsettled state of silver, there is but little encouragement to carry out the original intention of working the mine ourselves and concentrating the ore. Moreover, it would be almost impossible to get money for this purpose at the present time. Mr. H. W. Lawrence is watching the company's interest faithfully, and the stockholders may rest assured that the best possible under the circumstances will be done for each and all alike. The Queen of the Hills Mine is still leased, but with no result beyond a trifle occasionally in the shape of royalty.

RUBY AND DUNDERBERG CONSOLIDATED.—Dunderberg: There are 12 tributers at work and 25 tons ore shipped during the week. Nothing new to report.—Lord Byron: The south drift from the bottom of the shaft is in better working ground; progress this week, 8 ft.; total, 23 ft. from the shaft. The stope at north end of No. 1 cave is the only ore producing stope at present. The ore body at this point is small; but the quality good. There is ore going down at this place, which is not being worked at present, as it can be extracted to better advantage from the bottom level when it is further advanced. The winze 60 ft. north of the shaft has been sunk 6 ft. during the week; total, 31 ft. There is a large body of low grade ore and iron in bottom, which assays from $5 to $10 per ton. There are 10 tributers at work; no ore shipped during the week. —Home Ticket: The winze at the end of the bottom level has been sunk 6 ft. during the week without any change; total depth, 60 ft. below the bottom level. The ore in the winze below the 300 ft. level has improved considerably in the past few days, it is now from 3 to 4 ft. in width, and of good quality, progress this week, 4 ft.; total, 24 ft. below the 300 ft. level.

VIOLETA GOLD.—R. R. Nancarrow, September 30: I beg to submit to you the following report, which, as you will see, mainly consists of a review of the work accomplished from the commencement of operations until the present, a period of nearly six months. I arrived here on the 5th of April last, and at once commenced a survey of that part of our property lying on the south east side of the River Sil, in order to ascertain the best way and manner of conveying a part of the said river to the most advantageous position for sluicing the deposits of auriferous alluvion, which, with the making of plan and sections, was completed during that month, and on the 7th of May we cut the first sod of our new canal or watercourse. Before proceeding to describe this work, I may remark the Sil is a very large river, and it so happens that at the point—and for a long distance above and below—where it was necessary to divert a part of it for our purpose, in order to bring the water on to the mine at a sufficient height for sluicing, it passes through a comparatively narrow gorge, where the current is both deep and strong, on both sides of which there are very high and precipitous granite cliffs. This rendered our undertaking much more difficult, tedious, and expensive than it would otherwise have been; but I am pleased to be able to state that all the difficulties have been conquered, the work is accomplished successfully, and we have an ample supply of water on the mine for all purposes. Without going into the details, I may state that at the most convenient place in the said gorge we have constructed a rough, strong dam, by blasting down the sides of the cliff, which has taken at least 2350 cubic yards of stone, and is well and substantially built to resist the strong current of water. From this point downwards towards the mine we have blasted away the sharp angles of the cliff where necessary, and had 1200 ft. of 20 in. diameter iron tubes sent from England, which have been put together in proper position, securely fastened to the prepared side by strong iron cramps, where possible, and in other places suspended by wire ropes; insomuch they are firmly and safely fixed. From the end of these tubes to the mine we have cut and made a watercourse of sufficient capacity and in a convenient position for carrying on sluicing operations on a large and economical scale. This watercourse has in places been cut through the banks of auriferous gravel; at other parts we have had to build a dry wall to contain one side, and at one point we were obliged to cut through a ridge of very hard rock, which was stretched at right angles across our path, and necessitated a cutting of about 40 yards long, and from its highest point 8 yards deep. Thus, in making the canal from the end of the large tube to the mine, we have cut away nearly 400 cubic yards of rock, removed 3265 yards of earth and alluvion, and built 351 yards of dry wall; all of which has been done as economically as possible, consistent with security and efficiency, and as the result we have secured an ample and inexhaustible supply of water, freely flowing on to the mine, which may be conveyed from one end of the property to the other. This work which was begun on the 7th of May, was completed successfully and the water flowed through the large tube and canal on the 31st August. And now looking at it as a complete piece of pioneer mining engineering, carried out in this country under many disadvantages, exclusively by native labour, and taking it at its lowest estimate, I do not hesitate to say that there is nothing in connection with it that we need be ashamed of, whether as regards the time and money it has taken, the manner in which it has been carried out, or its adaptability to meet all the requirements for which it has been made. As necessarily connected with the foregoing, we have obtained from the Government the concession of the water supply, which gives us a legal and indisputable title to its use. On the mine we have fixed ten sluices; six at different places alongside the new canal to work the upper banks of alluvion through which it runs, and four adjoining an old canal to prove the value of the deposits of gravel lying in the lower part of the property. In reference to the latter, I may say we did a little sluicing there some weeks ago, but found we were working a part that had evidently been turned over by the Romans who, during their possession of this country, carried on gold mining very extensively in this neighbourhood; consequently the results as regards the produce of gold were not satisfactory. We have not, however, given up this part, but intend as soon as the water rises in the old canal, which it will probably do in two or three weeks, to resume the trial and push on our works until we strike the proper bed of auriferous earth, which I have no doubt is within 100 ft. of the present forebreast of our cutting. In the upper part of the mine first referred to, we have just commenced working five sluices, the sixth being not quite finished, and it is my pleasing duty to inform you that we are getting out some nice gold already, and in considerable quantities. We have not yet been working long enough to clean up, consequently I cannot give the exact produce, but as far as we have gone and can judge the quantity of gold seen in the concentrations, it is quite equal to our expectations, and if the whole bank be relatively equal in value to those parts on which we have begun, I believe by a vigorous and economical system in working, sufficient quantities of gold will be found to leave a satisfactory profit after paying all working expenses; but of course I shall be able to speak more positively on this all-important point after getting farther into the bank, and testing it thoroughly from top to bottom, and ascertaining the exact produce in gold. At present I can only add that we have many points in favour of working on a large and economical scale, having an ample supply of water in the most convenient position, well made and capacious sluices, and an abundant supply of cheap native labour; and now that the initiatory work has been completed, all our attention and energy will be applied to the extraction of gold in order to bring the mine into a profitable condition as soon as possible.

VICTORIA (LONDON).—Total quartz crushed for the month ending August 15, 1885 tons; total gold obtained, 371 ozs. 9 dwts. 12 grs.; average per ton, 4 dwts. 9¼ grs.; receipts, 890*l.* 0s. 11d.; payments, 1137*l.* 18s. 10d.; loss, 243*l.* 17s. 11d.

## THE COLORADO UNITED MINING COMPANY (LIMITED).

The directors' report to the 31st March last states the interval that has elapsed since the last ordinary general meeting is longer than usual, but it will be remembered that a special general meeting was held in July, 1884, when a committee of shareholders was appointed for making, in conjunction with the board, definite arrangements with Mr. Hamill. The conclusion of these arrangements, and of others consequent upon change of management, and the desirability of awaiting the return of the secretary from the mines, which he has recently visited, have been further causes of delay in holding the present meeting. The board desire to testify to the valuable assistance rendered by the committee, and to congratulate the shareholders that complete control has at length been obtained over their extensive property. The titles to the various lodes and properties of the company have also been investigated by counsel of high standing in Denver. The arrangements with Mr. Hamill included—the acquisition by purchase from him of the following lodes, or portions of lodes, viz.:—the James G. Blaine, Roscoe Conkling, Abraham Lincoln, J. V. Elwell, East Fenton, Elephant, and Muldoon, the whole of which were intermixed with the company's property. These lodes are beyond question valuable, some of them having been proved at various points, and special attention will be directed to their further development. These lodes are alluded to in Mr. Hamill's report of 27th October, 1883, in the following terms:—

These several deeds, together with one from Stewart and myself, when made to the trustees of the company, would absolutely prevent any interference, on the part of others, with the company's working the full run of ground from Brown Gulch to a point within a few feet of the Baltimore tunnel. Considerable outlay has been necessary to perfect arrangements, and to pay debts outstanding on the resignation of the former manager, and, in addition, it has been found absolutely essential to the safety and efficiency of the mine to expend a further sum on the timbering of the shaft and some of the levels, upon the machinery, and upon work, to prevent the flooding of the mine by the melting snows of the early summer. A new boiler of increased capacity, new pumps, rock-drills, and an air-compressor, which was upon the property, have been placed in position with the object of more rapid development, and the manager (Col. Baldwin) has, by extending the 11th and 12th levels west, met with good ore, and on the 5th September reports that in the 11th level there is now a solid vein of mineral, averaging 2½ to 3 in. in width, from top to bottom of the level; every additional foot driven in this mineral increases the probability that we are penetrating an extensive orebody. I have just milled 1000 lbs. of this ore, which yielded 255 ozs. of silver and 10 per cent. of lead per ton. Some ore from this level, sent home and assayed here by Messrs. Johnson and Matthey, gave 662 ozs. per ton.

On the 17th September Col. Baldwin reports on the 14th level east as follows:—In the 14th level east we are nearly under the winze, which is sunk to a depth of about 30 ft. below the 13th level, at a point 265 ft. east of the main shaft. The heading of this level now shows a vein 3 to 4 in. wide, well defined, and well mixed with mineral. The indications of a solid ore vein at no great distance are very good. I am now taking the water out of the winze below the 13th, and shall sink it down to the 14th as soon as possible.

And, under date 19th September, he writes as follows:—The mineral in the 14th level is steadily increasing. Judging from present appearances, I think we will soon reach solid ore. I am now sinking the winze below the 13th level. From the top of the winze to a depth of 10 ft. I find a vein of solid mineral, averaging 3 in. in width. For the next 10 ft. the mineral is scattered, but in the lower 10 ft. (the winze being now about 30 ft. deep) the vein of solid mineral appears again, and continues to the bottom, where it is 5 in. in width. The entire ore vein in the lower 10 ft. of this winze, without any sorting, averages 98 ozs. of silver per ton. With the exception of the new boiler and pump, which have been charged to plant, and the newly acquired lodes which have been charged to purchase account, the above-mentioned extraordinary outlays have been charged to revenue, and, coupled with the small output of the mine, occasioned in part by its having been flooded, have resulted in a loss on mining operations. Reference to the balance-sheet will show that money has been borrowed; this has been supplied by the directors and their friends; and in view of the possibility of further requirements, you are now asked to sanction an extension of this loan under the 42nd clause of the Articles of Association. Assays made in England for other purposes have brought to light the fact of the existence of gold in the company's minerals; and on his recent visit to Colorado, the secretary found that this subject has also been receiving the attention of the manager; sufficient information has not yet been obtained to speak with any degree of certainty as to what extent gold may be diffused through the mineral, but investigations into this matter are being still continued. Your directors take this opportunity of recognising the valuable assistance they have received from Messrs. John Taylor and Sons, who recently consented to act as consulting engineer to the company. It is a subject of regret to your directors that two of their colleagues, Mr. W. Frazer Rae and Mr. C. F. Montressor, have, on account of private affairs, resigned their seats at the board.

## QUICKSILVER.

| | 1884. | 1885. |
|---|---|---|
| Imports from Jan. 1 to Sept. 30, bottles, about | 56,426 ... about | 50,924 |
| Exports " " " " | 39,477 ... " | 40,711 |
| Imports for September " " " " | 500 ... " | 301 |
| Exports " " " " | 5,734 ... " | 9,644 |
| Price per bottle, about ..... | £5 12 0 ... " | £6 2 6 |

Stock in London to September 30, 1885, roughly calculated, is about 75,000 bottles. J. BENNETT BROTHERS.

*London, October 9.*

COPPER STATISTICS.—Messrs. Strauss and Co., for the first occasion for some time, report a falling off on the month in the statistics of copper. The decrease is small—a reduction of 132 tons only. In the price per ton there has been a reduction of 1*l.* 15s. per ton. Supplies last month were 8249 tons, and the deliveries 8481 tons, whilst the supplies for the 12 months ending September have been 115,173 tons, and the deliveries 99,667 tons.

**C. PASS AND SON, BRISTOL,**
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c. and DROSS or ORES containing COPPER, LEAD, AND ANTIMONY.

**GEO. G. BLACKWELL,**
26, CHAPEL STREET, LIVERPOOL,
HANDLES
MANGANESE, BARYTES, SPARS, and ALL ORES on SALE or PURCHASE.

**HENRY WIGGIN AND CO.,**
(Late EVANS AND ASKIN),
NICKEL AND COBALT REFINERS,
BIRMINGHAM.

**QUIRK, BARTON AND CO.,**
61, GRACECHURCH STREET, LONDON, E.C.,
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, &c., And DROSS or ORES containing LEAD.

ESTABLISHED 1866.—THIRTEEN YEARS IN CORNWALL.
**SAMUEL JAMES,**
STOCK BROKER AND MINING SHARE DEALER,
14, ANGEL COURT, LONDON, E.C.
Member of the Redruth Mining Exchange.

Those who wish to buy or sell any mining shares should consult Mr. James. Mr. J. devotes his entire attention to home and foreign mines, and places his special information at the disposal of his clients. That mining offers undoubted advantages for quick returns no one can deny. Look at the enormous sums of money paid in dividends by home and foreign mines. A large number of wealthy families owe their present proud positions to adventuring in LEGITIMATE MINES. With a better price for metals many of the smaller priced shares would immediately advance some hundreds per cent.

TREVAUNANCE AND WEST KITTY SHOULD BE BOUGHT AT ONCE.

There are many mines worth attention, as proceedings of recent share holders' meetings prove beyond doubt. During the last 40 years there has no such opportunity presented itself as the present for investment in British mines. Metals are certain to advance. In well-informed circles no doubt is entertained on this point. Buyers must not further delay orders.

SeeSelected List published by S. James, 14, Angel-court, London, E.C.

SPECIAL BUSINESS in the following or part:—

| | | |
|---|---|---|
| 25 Bedford United, 5s | 50 Almada, 1s. paid, 3s. | 100 Nacupai, 1s. 3d. |
| 50 Carn Camborne, 2s. 6 | 28 Asia Minor off. wand. | 30 New Albion, 30s. |
| 10 Devon Con., 40s 6d. | 60 Akankoo (f.p.), 3s. 6d. | 105 New Emma, 4s. |
| 120 Devon Friendship, 1s | 500 Balkis, 9d. | 100 Nouveau Monde, 2s. 3 |
| 50 Drakewalls, 2s. 6d. | 50 Bratsberg, 7s. 6d | 50 Nundydroog, 9s. 6d. |
| 30 East Blue Hills, 29s. | 100 Cartago, 3s. 3d. | 50 Nine Reefs, fullypaid, 3s. 3d. |
| 20 Ecton, 25s. | 10 Copiapo, 55s. | 65 Ooregum, 3s. |
| 50 Frongoch, 3s. 9d. | 25 Canada Copper, 3s. | 100 Oscar Gold, 4s. 6d. |
| 5 Great Laxey, £9 12s 6 | 100 California Gold, 2s. 9d | 100 Oscar Gold, Vendors, fully pd. 3s. 9d |
| 30 Gunnislake (Clit) 4s 3 | 100 Callao Bis, 5s. | 80 Organos, 8s. |
| 150 Great Holway. | 200 Chile (New), 18s. pd., 6s. 9d. | 50 Orita, 22s. |
| 30 Home Mines Tst.13s 9 | 20 Chontales, 2s. 6d. | 100 Pestarena 1s. 3d. |
| 20 Killifreth, 12s. | 100 Colombian Hyd., 9s 3 | 100 Potosi, New, 4s. 3d. |
| 20 Kitty St. Agnes, 12s 9 | 100 Devala Moyar, 3s. | 10 Port Phillip, 1s. 6d. |
| 30 Leadhills, 43s., | 200 Denver Gold, 4d. | 50 Panulcillo, £1 17 6 |
| 10 New Kitty, 16s. | 250 Eberhardt, 1s. | 100 Ruby, 5s. |
| 20 New Wt. Caradon, 2s. | 3 El Callao, £50. | 20 Richmond, £3 5s. |
| 25 Phœnix United, 35s | 50 Frontino, 12s. 6d. | 25 Rio Tinto, £8 12s. 6d. |
| 25 Polberro, 41s. | 200 Glenrock, wntd | 10 Schwab's Gully, £3 7 6 |
| 50 Prince of Wales 7s 3d | 100 Gold Coast, 1s. 3d. | 200 Silver Queen, off. w. |
| 100 Parys Copper, 9d. | 50 Hoover Hill, 7s. 6d. | 50 Spitzkop, 8s. |
| 33 Roman Grav., £4. | 200 Indian Consolidated, 4s. | 60 Tacquah, 1s. 9d. |
| 150 South Caradon, wtd, | 10 Javali, 3s. | 100 Tocopilla, 2s. 6d. |
| 10 So. Condurrow, £8¾. | 100 Kohinoor B, 2s. 3d. | 11 Tolima A, £2 17s. 6d. |
| 20 South Darren, 9s. | 100 La Plata, 5s. 3d. | 10 Tolima B, £2. |
| 10 South Frances, £8 15s | 100 Lisbon-Berlyn, 9d. | 100 Transvaal Gold, 2s. 3d |
| 10 Trevaunance, 49s. | 15 La Trinidad, £4 1s 3 | 50 Tambracherry, 4s. 6d. |
| 20 Van, 31s. | 20 Mason-Barry, £7 5s. | 20 U. Mexican, £2 7s. 6d |
| 10 West Kitty, £8 5s | 50 Montana, 47s. | 100 Victoria Gold, 2s. 9d. |
| 10 Wheal Basset, £6½. | 20 Mysore Gold, 41s. | |
| 25 Wheal Crebor, 15s. 6d | | |

*.* S. James can buy or sell any of the above shares. Correspondence invited. Trustees, executors, and others will find their duties considerably lightened by submitting schedule of shares held to Mr. James, who will return the same by next post with market values attached.

Orders by letter or telegram promptly attended to. Speculative accounts not opened on any terms whatever. Send for selected list of Mines. CLOSING PRICES issued every Tuesday and Friday.

Bankers: IMPERIAL BANK, Lothbury, E.C.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER, 29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years), Can SELL the following SHARES:—

| | | |
|---|---|---|
| 100 Almada, 2s. 9d. | 30 Home Mines Tst., 13 6 | 30 Oscar Gold, 5s. |
| 53 Akankoo, 2s. 3d. | 25 Holywell District Ld. | 20 Panulcillo, £2 1s. 3d. |
| 80 Bratsberg, 6s. 3d. | 50 Hoover Hill, 8s. | 50 Potosi, 4s. 6d. |
| 250 Balkis, 7d. | 100 Indian Consols, 4s. 3d | 40 Prince of Wales. |
| 25 Coed-y-Fedw. | 50 Kohinoor B, 2s. 6d. | 60 Ruby, 5s. 6d. |
| 60 Colombian Hyd., 10s | 40 La Plata, 5s. 3d. | 15 Rio Tinto, £3 10s. |
| 170 California Gold, 2s. 9d | 10 La Trinadad, £3 17s 6 | 10 Richmond, £3 7s. 6d. |
| 75 Callao Bis, 5s. 3d. | 75 Lisbon-Berlyn, 1s. | 40 South Darren, 2s. 6d, |
| 50 Chile Gold, 7s. | 15 Montana, £2 6s. 3d. | 10 Schwab's Gully, £3 7 6 |
| 80 Chontales, 2s. 3d. | 20 Mysore Gold, 41s. | 100 Transvaal, 2s. |
| 15 Colorado, £2 9s. | 150 Nouveau Monde, 2s 3 | 15 U. Mexican, £2 8s. 9d. |
| 100 Eberhardt, 7d. | 50 Nundydroog, 9s. | 150 Victoria, 3s. 3d. |
| 30 East Blue Hills, 29s | 50 New Albion Gold. | 20 Van, £1 8s. 9d. |
| 50 Frontino, 12s. 6d. | 50 New W. Caradon, 2s | 25 Wheal Crebor, 17s. 6d |
| 75 Glenrock, 3s. 6d. | 40 Organos Gold, 7s. 6d. | 100 Yeoland Consols, |
| 20 Great Holway. | 20 Orita, 21s. | fully paid, off. wd. |

Offers should be made for shares in the foregoing list when no prices are affixed.

NEW ALBION GOLD MINING COMPANY (Limited).—Capital less than £35,000 in £1 shares. Return for last month 1364 ozs. of gold, (certified by the Government), and worth nearly £5500. Total output for about 4½ months actual mining, £11,500 giving clear profits at the rate of about £24,000 or 60 per cent. per annum. Management very economical. Close to the magnificent harbour of Halifax, Nova Scotia. Dividend just paid, and funds for a second one in hand.

PAR TIN.—Special business in 150 shares at 15s.

Bankers: ALLIANCE BANK (Limited).

**J. W. WESTMORELAND, F.I.C.,**
Associate Royal School of Mines, London,
ANALYST AND ASSAYER.

Special attention given to the Wet Assay of copper and Sulphur estimations. Assays of Gold, Silver, Lead, Arsenic, Antimony, Iron, Nickel, Manganese, Zinc, and general Metallurgical Analyses.

Laboratory:—25, PARK SQUARE, LEEDS.

MINING ENGINEER.—An old established Company DESIRES to ENGAGE a competent MINING ENGINEER to proceed to Mexico, and undertake the technical management of important silver mines, at a liberal salary. Must be a man of unimpeachable character and considerable experience, and should be, at any rate, theoretically acquainted with silver mining.

Perference will be given to a man with a practical knowledge of silver mining, and to one acquainted with Spanish.

Address "Unit," care of Leathwait and Simmons, 1, Pope's Head-alley, Cornhill, E.C.

October 10, 1885.

WANTED, a SET of good SECOND-HAND ORE DRESSING MACHINERY for Dressing Lead and Blende Ores,

Applications, giving full particulars of the Machinery, where it may be seen, and lowest cash price, to be sent to "A. B.," Mining Journal Office, 26, Fleet-street, E.C.

MINING OFFICES, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.
ESTABLISHED UPWARDS OF FORTY YEARS.

MESSRS. WATSON BROTHERS, in referring to their public Circular in the *Mining Journal*, would also observe that they BUY and SELL SHARES at the *nett* market prices of the day in all well-established and respectable Mining Companies, in English and Foreign Funds, Railway Stocks, &c.

YORK AND LANCASTER UNITED MINES COMPANY (LIMITED).
*IN LIQUIDATION.*
Rimington, near Clitheroe.

The Mines of this Company, producing lead ores, barytes, and calamine up to the date of Liquidation, together with all the WORKING PLANT, MACHINERY, and BUILDINGS, TO BE DISPOSED OF BY PRIVATE TREATY.

For terms and other particulars, apply to the Liquidator, Mr. W. Whitaker, Chartered Accountant, 1, Chancery-lane, Manchester; or to Messrs. Cooper and Sons, Solicitors, 86, King-street, Manchester.

SILENCIO GOLD MINES (LIMITED).—Six rich lodes, varying from 18 in. to 6 ft. in width, yielding an average of 2 ozs. of gold to the ton; one lode giving, by assay, 4 to 5½ ozs. of gold per ton. An assay made by Messrs. Johnson and Sons, Assayers to the Bank of England, on general average lode stuff, showing no visible gold, gives 6 ozs. 12 dwts. 12 grs. to the ton. 10,000 shares already applied for.

Full prospectus and reports forwarded on application to the Secretary, 32, St. Swithin's-lane, London, E.C.

GREAT WORK MINE,
IN THE PARISH OF BREAGE, CORNWALL.
MONDAY, 12TH OCTOBER.
IMPORTANT SALE OF EXCELLENT MINING MACHINERY, PLANT, MATERIALS, AND OTHER EFFECTS.

MR. W. J. JOHNS is instructed to SELL, BY AUCTION, on the above Mine, on MONDAY, the 19th day of October, 1885, at Twelve o'Clock precisely, the undermentioned valuable

MACHINERY, PLANT, AND MATERIALS,

Comprising 60 inch cylinder pumping engine, 9 feet stroke in cylinder, and 7 feet in shaft, with 3 boilers and fittings, and 2 balance-bobs, 25 inch cylinder, double winding-engine 6 feet stroke, with fly-wheel, cage, &c., and 11 ton boiler.

26 inch cylinder stamping-engine, with two fly wheels and boiler.

Two iron stamp axles, 16 and 12 heads, with lifters, cams and frames complete, 60 feet shears with sheaves, &c., complete; 10 arm capstans, 300 fms. 3¼ inch good steel wire-rope, 650 fms. 2¼ inch ditto; two horse whims, four kibbles, 6 circular head buddles, 6 Borlase's buddles, 40 double frames, 56 single dead frames, 4 hand frames, wooden sheds, &c., 12 feet water-wheel calciner, 12 feet diameter, dressing floors, &c., complete, 160 fathoms 13 inch pitwork, with 4 12¼ inch plunger poles, 160 fathoms 13 inch rods, with strapping plates and bolts complete; 4 pairs 18 inch yokes, drop screws, blocks, and pulleys, lot of chain various sizes, shaft tackle, with sheaves, &c., turn pulleys, 5 feet diameter, 3 holding down ditto, pulleys, sheaves, two powerful crab winches, 450 fathoms skip road, equal to new, iron skips, iron tram wagons, 8 fathoms rail iron, 500 fathoms iron stave ladders, launders, 130 fathoms iron water pipes, strapping plates, P. P. rods, holding down bolts, pole cases, stuffing boxes and glands, shafting, iron stamps, axles for water wheels, faggot and cast iron rods, about 8 cwts. of brass, 2 tons old iron, 2 excellent smiths' bellows, smiths' and miners' tools, quantity of powder and dynamite, and the general assortment of articles used in mines.

The foregoing engines, machinery, plant, &c., will be found on inspection to be in excellent condition, some almost equal to new, and well deserving the attention of merchants, mining agents, and others. The roads from the mine are convenient for removal.

Refreshments will be provided on the Mine at Eleven o'clock.

SALE AT TWELVE O'CLOCK.

For further particulars apply to the Agent on the Mine; or to the Auctioneer, Truro.

Dated October 7th, 1885.

YEOLAND CONSOLS.

FOR SALE, fully paid shares in this mine, price 12s. 6d. per share.

Address, W. Marlborough, 29, Bishopsgate-street.

This day, 8vo, cloth, with 55 Illustrations, 7s.

HANDBOOK OF TECHNICAL GAS ANALYSIS: Containing concise instructions for carrying out Gas-Analytical methods of proved utility.

By CLEMENS WINKLER, Ph.D., &c.

Translated, with additions, by George Lunge, Ph.D., &c., author of "Distillation of Coal Tar," &c.

John Van Voorst, 1, Paternoster-row.

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Letters containing Correspondence and all other Contributions should be addressed to "The Editor." Rejected matter cannot be returned. Correspondents are requested to write on one side of the paper only.

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|---|---|---|
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*.* A number of communications are unavoidably held over.

THE MINING JOURNAL,
Railway and Commercial Gazette,

*LONDON, OCTOBER 10, 1885.*

## ELECTRICITY IN MINES.

Electricity in connection with mining operations has certainly not made the rapid strides that was at one time expected of it, but there is now every appearance that its progress before long will be of a more marked character, although it has not met with the encouragement that might have been expected from the Government and those interested in the safe and economical working of mines. It is now more than six years since the Royal Commission was appointed to enquire into and report on the best means for the prevention of accidents in mines. That Commission is still sitting, or in existence, and the probability is that before the final report is issued electricity will have gone a long way in accomplishing the objects which the Commission was appointed to enquire into. This was pointed out a few days ago in a lecture delivered by Prof. Merivale in connection with the Durham College of Science, Newcastle. He pointed out how easily gas could be detected in mines by means of electrical indicators, the wires connected with which could be carried to the office on the surface, and a bell made to ring showing the part of the mine where the gas had accumulated. This would be a very great advantage indeed, seeing that the miner whilst following his work does not look for the presence of gas, whilst his lamp being on the floor, would not show the carburetted hydrogen which, owing to its lightness, makes its way to the highest part of the working place. The so-called safety-lamps, such as the Davy, Clanny, &c., have destroyed hundreds of lives, and what has long been looked forward to is an electric lamp, which, of course, could not ignite any mixture of air and gas, however explosive the two might be. In producing such a lamp great difficulties have had to be overcome, but it appears that Mr. Swan, the well-known electrician, has solved the problem and perfected a portable lamp, which, lighted by electricity, could be carried about, and thus give the miner a brilliant illuminating power, from which no danger need be apprehended in connection with fire-damp or coal dust. The new lamp, along with others, will be exhibited at Newcastle to-day (October 10th) at a meeting of the North of England Institute of Mining and Mechanical Engineers. The electric lights, it may be said, is now to be seen at the top of a good many mines, more especially where the screens are placed, whilst it is also used in some of the main roads at the bottom. The electric light, indeed, has been in operation for several years at a number of mines in the North of France, and at Gossen Lagasse Gramme's electric light illuminates the pit bank by night, and it is also used at the extensive machine works of John Cockerill and Co., in Belguim. Underground haulage, a costly item in connection with the working of mines, also promises to become subservient to the power of electricity, and Prof. Merivale, in the course of his lecture, stated that the ropes now in use and the expensive machinery could easily be dispensed with and a more economical system carried out by the electric power. By means of electricity all they had to do was to connect two wires at the bank, and the electric current would send the tubs or corves along. It was thought that in mines the men might be injured by touching the wires as they walked along, but this alleged danger was rendered all but impossible by Act of Parliament, which made it compulsory that the electric machines should be so constructed that they would not produce power sufficient to do any harm, but without that the men when aware of the danger there was in touching them would give them as wide a berth as possible. In workings underground the electric light could be distributed in various directions by means of resistance wires and regulators. As has been frequently pointed out it will be seen that electricity would be a great and valuable help to the miner whilst following his ordinary employment by giving him a brilliant light free from all danger even in places where there were accumulations of gas, and at the same time the mineowner would be greatly benefited by having recourse to electricity for underground haulage. But in blasting and sinking operations electricity can be made to play an important part, and save a great deal of unnecessary manual labour and risk. Simultaneous blasting by electricity has been most successful in the sinking of shafts, and in the driving of heavy stone drifts. Five or six are bored 6 ft. deep, at a distance of rather more than 2 ft. from the side of the shaft, and at equal distances from each other, all pointing to the centre at an angle of about 75°. The holes are fired simultaneously when the ground is broken up, and if dynamite is used the force of the explosion goes downwards for a considerable depth. In this there is also the advantage that there is no danger in descending a shaft after a missed shot fired by electricity. The simultaneous firing is accomplished by means of a cable consisting of a strand of six or seven tinned copper wires, insulated with indiarubber for about ¼ in. or less, and this may again be covered with tarred hemp. Two of the cables hang down the shaft, and after the holes are charged a fuse is put into each. The wires of one fuse are connected to one end of the wires of two or more fuses, and the cables being connected there is one continuous line of wire formed from the surface down one cable to each hole, and back up the other cable to the surface again. The men then leave the shaft, and the cables are connected to the machine, and the holes exploded. From these few facts it will be seen that electricity is likely to play a most important part in mining, sinking, blasting, and driving operations underground, and that at no distant date, securing not only economy as regards working operations, but the safety of the workmen as well.

# The Mining Market: Metals, Ores, &c

METAL MARKET—London, October 9, 1885

| Iron. | £ s. d. | £ s. d. |
|---|---|---|
| Pig, GMB, f.o.b., Clyde | 2 2 10 | — |
| ,, Scotch pig, No. 1 Gartshe. | 2 6 0 | |
| ,, ,, Coltness | 2 9 6 | |
| ,, ,, Clyde | 2 6 0 | |
| ,, ,, Govan | 2 3 0 | |
| Bars Welsh, f.o.b. Wales | 4 7 6 | 4 10 0 |
| ,, ,, in London | 5 0 0 | — |
| ,, Stafford., ,, | 5 15 0 | 6 0 0 |
| ,, in Tyne or Tees | 4 15 0 | — |
| ,, Swedish, London | 9 0 0 | 9 10 0 |
| Rails, Welsh, at works | 4 10 0 | — |
| Sheets, in London | 7 0 0 | 7 5 0 |
| Plates, ship, in London | 5 15 0 | 6 5 0 |
| Hoops in London | 6 0 0 | 6 2 6 |
| Nail rods, in London | 6 0 0 | — |
| Steel. | | |
| English spring | 8 0 0 | 18 0 0 |
| ,, cast | 25 0 0 | 45 0 0 |
| Swedish, keg | 12 0 0 | — |
| ,, fag. ham. | 12 10 0 | — |
| Rails at works | 4 15 0 | 5 0 0 |
| ,, Light, at works | 5 15 0 | 6 0 0 |
| Lead. | | |
| English pig, common | 11 12 6 | 11 15 0 |
| ,, ,, L.B. | 11 15 0 | 12 0 0 |
| ,, ,, W.B. | 12 0 0 | 12 2 6 |
| ,, sheet and bar | 12 5 0 | — |
| ,, pipe | 12 15 0 | — |
| ,, red | 14 5 0 | 14 15 0 |
| ,, white | 16 0 0 | 19 0 0 |
| ,, patent shot | 14 5 0 | — |
| Spanish | 11 5 0 | — |
| Spelter. | | |
| Silesian ordinary brands | 14 2 6 | 14 5 0 |
| ,, special brands | 14 7 6 | — |
| English Swansea | 15 2 6 | — |
| Sheet zinc | 17 17 5 | — |

| Tin. | £ s. d. | £ s. d. |
|---|---|---|
| English, ingot, f.o.b. | 93 0 0 | — |
| ,, bars ,, ,, | 94 0 0 | — |
| ,, refined | 95 0 0 | — |
| Australian | 90 10 0 | 91 0 0 |
| Banca | nom. | |
| Straits | 90 10 0 | 91 0 0 |
| Copper. | | |
| Tough cake and ingot | 43 10 0 | 44 13 9 |
| Best selected | 45 0 0 | 46 0 0 |
| Sheets and sheathing | 50 0 0 | 52 0 0 |
| Flat Bottoms | 55 0 0 | — |
| Wallaroo | — | nom |
| Burra, or P.C.C. | 50 0 0 | — |
| Other brands | nom. 48 0 0 | 50 0 0 |
| Chili bars, g.o.b. | 39 7 6 | 39 10 0 |
| Quicksilver. | | |
| Flasks, 75 lbs., war. | 6 2 6 | — |
| Phosphor Bronze. | | |
| Alloys I | | £93 0 0 |
| ,, V | | 100 0 0 |
| ,, VI. and VII. | | 115 0 0 |
| ,, XI. | | 95 0 0 |
| ,, Duro A, Duro B | | 90 0 0 |
| Antimony | £36 0 0 | — |
| Brass. | | |
| Wire | 5½d. | |
| Tubes | 6⅝ | -7⅜d. |
| Sheets | 5⅞ | -6½d. |
| Yel. met. sheath. & sheets | 4⅞ | -4⅛ |
| Tin-Plates.* | per box | |
| Charcoal, 1st quality | 0 18 0 | 0 19 0 |
| ,, 2nd quality | 0 17 0 | 0 18 0 |
| Coke, 1st quality | 0 15 0 | 0 16 0 |
| ,, 2nd quality | 0 14 6 | 0 15 6 |
| Canada, Staff. or Gla. at Liverpool | 0 17 6 | 0 2 6 |

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 5s. per box more than IC quoted above, and add 5s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

### General Remarks.

This week our markets have been quiet, and prices for the most part have been easy. The movements in copper have attracted the principal attention, and a very unsettled feeling has prevailed in that market. The influence arising therefrom is serious, and is spread more or less throughout the whole trade. The losses being incurred in copper are so great and serious that operators are crippled and unable to deal largely in any other metal. Confidence has been shaken, and more particularly as that reported improvement in trade of a few weeks back has not been continued nor allowed to fully develope. Checked by adverse political affairs on the Continent, retarded by the prevalence of a feeling of hesitation and weakness, and interfered with by the possible advance in the value of money in the near future, as well as the close approach of the General Election, it is not remarkable that the tone is depressed. The advices also from the neighbouring centres are less promising; and in the North we hear of sales being effected by those operators who recently purchased in expectation of better times, and such sales, it is significantly added, are being made at constantly reduced prices. Pig-iron is dull generally, and manufactured shows no signs of vitality, whilst prices are gradually descending lower and lower. The Continental iron trade likewise shows no improvement, the Belgian market being particularly dull. However, pig-iron is there well sustained in price; but manufactured is decidedly weak. In France the iron trade is reported in about as bad a state as it is possible, although hopes are entertained of some speedy recovery. The state of the German trade is also very unfavourable, and it is difficult to say whether the demand is the more limited for crude or finished iron, the enquiry for both

being exceptionally slack. Some large speculative sales are reported of crude iron in Silesia, with the necessary result that the depression has been intensified, at the same time the demand for manufactured being a little better prices are somewhat steadier. With regard to copper there is general depression. Chili bars are being knocked out by holders at the best possible prices. Consumers are not buying freely, and shipping business is contracted, and smelters are not fully supplied with orders. For tin the steadiness of the market has been preserved, and even little better prices have at times been realised. It is the only metal which exhibits anything approaching strength at a remunerative figure. In this metal there is a fair speculative enquiry, a moderate business doing for general requirements, and favourable advices are received from time to time from America and elsewhere. The demand for tin-plates is also well sustained, and prices receive a good deal of support. There are numerous enquiries, and buyers seem anxious to place their orders at present prices. In South Wales especially is business more active, and makers there are realising better prices than they were a month ago. The steel trade, on the other hand, keeps dull, and buyers purchase merely from hand to mouth, and there is a good deal of quietude at most of the works. Spelter is also rather quiet, and without any noteworthy change in prices, whilst lead is steady, with only a small business doing. Quicksilver has undergone no particular change; but second-hand lots are offering at somewhat under importers' prices. At the various Quarterly Meetings of the iron, hardware, and tin-plate trades held this week business has not been very brisk. At Middlesborough on Tuesday there was a quiet feeling, and scarcely any enquiry for forward delivery, whilst far more disposition existed to sell than to buy at the ruling quotations, both for sharp and forward prompts. At Wolverhampton on Wednesday there was a steady tone, but not very much doing. Prices of sheet iron, however, were declared at an advance of 5s. to 7s. 6d. for the quarter, and tin-plates showed an improvement of 6d. to 1s. 6d. per box. The tone existing at the Birmingham meeting yesterday was one of disappointment, notwithstanding that some of the ironmasters were better off for orders than at the commencement of the quarter; but no improved prices could be realised. The Board of Trade Returns for the past month show a decrease of 256,227*l.* in the values of the imports of metals compared with the same month of last year, and the exports for the similar periods show a decrease of 438,272*l.* sterling.

### COPPER.

This week the copper market has been thoroughly disorganised, and a most unhealthy feeling has prevailed. The lower prices have descended the greater has been the want of confidence, and so much irregularity has existed that a semi-panic feeling has characterised the tone, and holders have literally shelled out their copper. Reduction after reduction has been submitted to in prices. Operators have scarcely liked to make a bid, even at a reduction of (say) 2s. 6d. to 5s. below the previously accepted price, because, even at that reduction sellers have invariably at once been only too eager to part with their copper. It was thought that so long as the price of Chili bars remained in the forties, some strength and some support would be given to the market, but now the corner has been turned, and extensive sales have even been made in the thirties. What is the cause of these repeated concessions? Where is the "bull" party which should give strength to prices, and re-establish confidence in the tone? They have been made so much to smart during the past few months, they have been crippled to such an extent by the enormous losses they have been forced to incur, they have had to submit to such heavy and serious sacrifices, and they are now so thoroughly disgusted with the market that they prefer to wait and watch the course of events rather than operate to any extent; and in the meantime, supply and demand go on, we can scarcely say in their regular course, because the former is rapidly developing, and the latter is at best only remaining on an average. The market is becoming flooded more and more every day. Spain, America, Chili, Australia, all continue to pour forward their copper in abundance upon this market. Our stocks are increasing at a most alarming rate. To draw a comparison of prices with previous years is useless, because other matters connected with the trade have such an important influence now, whereas before they either did not exist, or at any rate did not have the same effect in previous times. There is a complete revolution going on in the trade, and the cause of that revolution is excessive supply. We do not attempt to prophecy in these columns, nor to say what figure will check supplies; but we lay the facts as they now exist before our readers. Prices have receded from speculative as well as regular courses, but it is to be noted that at the reduced rates there is scarcely so much disposition shown to go on selling. The returns from the Montana Company show that their two mills last month crushed 2848 tons of ore. To-day in Chili bars there has been an extensive business carried through, and on the whole the market is rather better than what it was yesterday. Buyers are less shy than they were, nevertheless sellers continue tolerably plentiful, hence the turnover has been very large. Business just now is not merely confined to transactions amongst the regular dealers and operators, but the outside public have also been led to dabble in the metal. Some have been induced to purchase on account of the reduced prices, others have been tempted to operate for the fall owing to the heavy supply and the bad state of trade in general, and these contrary elements at work are in great measure the cause of the present disturbed and unsettled state of the market. Manufacturers are fairly well booked with orders, the easy tendency of prices having enabled many merchants to place indents which they would otherwise have to refer back. Manufacturers, therefore, to some extent being independent, there is not the irregularity in prices for manufactured that there is for Chili bars, nor is there likely to be since the latter is largely governed by speculation, whereas manufactured is regulated more from what is doing for actual requirements.

### IRON.

This market remains flat, and the amount of business done at the Quarterly Meetings has been very disappointing, as with the improved tone of the last few weeks it was hoped that a better feeling and improved trade might have been pronounced at these autumn meetings, whereas there has been no increase of business and prices in a few instances have been rather easier. However, the market is not wholly without its good features, and the September returns of the Cleveland Iron Association are certainly more favourable, or, perhaps, it would be more correct to say, less unfavourable than those that have recently been published. The first point in them which calls for comment is a reduced make. There was 4000 tons less produced last month than in August. This, of course, is an indication that the trade is not good, and it is always a matter of regret that it should be found necessary to curtail production, but, still, when the necessity does arise, it is always advisable to meet it by minimising the output as a preventive to the destruction of the market is thereby occasional. That the necessity did exist nobody questions, for the enormous increase that was being made in stocks was the strongest evidence that could have existed, but now the matter is altered, and whilst last month there was an increase in the public stock of 23,518 tons, yet in the total makers' stocks, as given by the Cleveland Association, there was a decrease of 780 tons. The total make last month was 202,000 tons, of which 153,000 tons was Cleveland iron, and 49,000 tons of other kinds. There are 96 furnaces in blast, of which 75 are making Cleveland pigs. Last month the most favourable featnre in connection with the trade in the Cleveland district was the excellent shipments that were being effected, and it is satisfactory to note that these exports are being sustained on a fairly large scale, and it is possible with the declining tendency of prices they may be still further developed. If this should be so, and the production continues, restricted, all hope of better prices will not have been altogether removed. Another point which looks well in this week's returns are the shipments from Scotland, which compare favourably with the corresponding period of last year. The week before last we had occasion to bring a similar satisfactory feature in connection with the trade under the notice of our readers, and, therefore, it will be only necessary to briefly refer to the matter now. With these two exceptions the Scotch shipments throughout the whole year have been so decidedly unfavourable that the change is very marked and much appreciated, but there is a very great deficiency for the whole year yet to be made up. It is certain that unless a very great increase be effected in the export demand, the total returns of the exports this year will show not only a marked falling off compared with last, but also with very many years previous. However, it is a good sign to observe that the change for the better is being sustained, and that a favourable comparison is borne with the same week of last year. Another point which rather calls for notice is the large imports of Middlesborough iron which have been made into Scotland this year, the quantity being 91,338 tons more than there was during the same time of last year. Almost every week the comparison increases by some thousands of tons, and this in some measure accounts for the very good shipments that have been recently effected from Middlesborough. At the same time the increased quantity cannot be reckoned altogether satisfactory, because it only shows that one part of the trade has flourished at the expense of the other. Cleveland iron has been consumed, even in Scotland, instead of Scotch, and this because prices of Cleveland iron are so much below values for Scotch. It is a significant fact that North Country iron can be produced and delivered in Scotland at less than what the Scotch makers can produce their iron, and this accounts for the heavy delivery of Middlesborough iron this year to Scotland. The Glasgow Warrant Market opened, on Monday, at 42s. 5d., and there was a large business done up to 42s. 8d., easing off at the close to 42s. 7d., and on Tuesday there was a very fair number of transactions carried through betwixt 42s. 7d. and 42s. 8d. On Wednesday there was a steady market, and a fair business done at 42s. 5½d., and yesterday the market was closed, and the closing figure to-day is 42s. 10d. per ton. The shipments last week were 11,297 tons, against 9655 tons for the same week of last year, being an increase of 1642 tons, and which makes the total shipments for the whole of this year 350,968 tons, against 430,831 tons for the same time of last year, and 505,637 tons for the similar period of 1883. There are still 90 furnaces in blast, and the public stock has been further increased by 1124 tons, now amounting to 626,824 tons, against 582,662 tons at this time last year, and 625,700 tons a week ago. The imports of Middlesborough pig-iron into Grangemouth last week were 7635 tons against 4260 tons for the same week of last year, being an increase of 3375 tons, and which makes a total increase for the whole of this year compared with last of 91,338 tons. The Middlesborough market is reported dull with scarcely anything doing for forward prompts. Prices are gradually descending, there being a fall of about 1½d. during the past week in the price of No. 3, which is now offering at 32s. 4½d. for sharp delivery, and 32s. 6d. for forward, and the price for No. 4 forge is 31s. 6d., whilst warrants are offering at 33s. to 33s. 3d. The public stock shows a further increase of 2535 tons for the week, and is now estimated at 102,000 tons. There is no improvement in manufactured, and ship-plates are offering at 4*l.* 12s. 6d.; angles at 4*l.* 10s., and bars at 4*l.* 15s. per ton. The Wolverhampton market has been quiet, sheets offering at 7*l.* 2s. 6d. to 7*l.* 5s. Marked bars are unaltered; second-class are quoted from 6*l.* to 6*l.* 10s., and common at 5*l.* 5s. to 5*l.* 10s. Common Staffordshire pigs are selling at 33s. to 35s., and Derbyshire at 39s. to 40s. per ton. At the Birmingham Quarterly Meeting yesterday bars and standard pigs were declared unaltered, and there was very little animation, specifications that were given out being principally in fulfilment of previous negociations. The upward movement is not maintained, notwithstanding that most makers have more orders than a month or so back.

### TIN.

This week the market for tin has been very good, and up to Wednesday inclusive prices continued to steadily advance, when 91*l.* 15s. became the official quotation, or 1*l.* per ton above the closing figure of last Friday. Yesterday, however, the disturbed state of the copper market drew all attention away from tin, and transactions were decidedly limited, and in the absence of business prices were quoted down 5s. per ton, whilst to-day the market has collapsed, losing nearly all it had previously gained, particularly for forward prompts. On Monday last the English smelters decided to allow no brokerage on parcels of tin under 1 ton, but whether this decision is advisable or not may be open to question. A few years back they arranged to alter the discounts from 2½ per cent. to 1¼ per cent., and to do away with brokerage altogether, but upon second reflection, and the unadvisibility of the latter course being pointed out in these columns, the smelters at their next meeting reversed their previous decision, and agreed to allow the 1 per cent. brokerage and to make the discount as already agreed 1¼ per cent. This has gone on for three or four years, and now the smelters have decided to do away with brokerage upon all small sales, presumably with the idea of making the broker increase his orders to quantities for over 1 ton. Since, however, the broker does not buy on his own account, it is rather difficult to see how he is to increase his orders beyond his clients requirements. It is not the part of a broker to purchase and lay up a stock, nor would it be in the interest of the smelters nor of the market for him to do so, because there would then be necessarily second-hand parcels offering, and the combination to maintain prices which has worked so well during the past few months would be practically of no effect. This is a course the larger brokers might reasonably be expected to adopt, for they have to study the interests of their clients, and if they are to be denied their brokerage upon small sales they can only turn dealers in the hope of thus making the business profitable. However, it is the smaller broker that will be the most seriously affected, for whilst his more wealthy competitor will look upon the arrangement on so small a quantity as 1 ton with a certain amount of indifference he who deals with only small clients, and has but a limited connection will be made to feel this extra draw upon his already spare income. Proportionately to the amount of business a broker brings to the smelter so he deserves his commission. and if the large broker with his numerous connections is to be paid for his extensive orders, so ought the smaller broker, who may be just commencing, and has to form a connection, be equally encouraged. We would point out that it is the only metal now where brokerage is paid for large orders, and not for small. A brokerage should be allowed to the broker, and to the broker only, and if the smelters who are able to work so well together in combining to maintain their prices, would decide to allow no more than the regular discount to merchants, and reserve the usual brokerage for the broker alone, they would find the brokers would be more active in seeking to promote the trade and stimulate business. As it is, there is little inducement. For small orders the broker is to receive nothing, and often for larger orders the brokerage is allowed to merchants as well as brokers. The demand for English tin at the present time is fair; but there is not a large business doing and prices continue strongly upheld at 93*l.* Compared with foreign this is by no means a high figure; but, at the same time, evidently a profitable one. Business is not materially checked thereby, and to push the trade might be advisable. We do not mean to create an artificial demand, for that would doubtless be only temporary, and the after ill-affect might be more serious, and do more harm to the trade than the good occasioned by the passing extra activity; but encourage legitimate business, even though it be small. It is the general tendency of the times to economise, and small orders are becoming more and more common almost every day, and, therefore, it is not advisable to discourage regular business, even though it be limited, otherwise the same characteristic which pervades other markets will be brought to bear upon tin, and consumers will, whenever possible, purchase foreign in place of English.

SPELTER is quiet, with a moderate business at somewhat lower prices, and we quote ordinaries at 14*l.* 2s. 6d., and specials at 14*l.* 7s. 6d. per ton.

LEAD is firm, and spot continues scarce, but arrival parcels of Spanish are obtainable at 11*l.* 5s., and English we quote at 11*l.* 12s. 6d. to 11*l.* 15s. per ton.

ANTIMONY remains quiet, without alteration, at 36*l.* per ton.

STELL remains dull, bnt a few moderate orders have been placed for rails at without much change in price.

TIN-PLATES are decidedly firmer, and a very fair business is being transacted.

QUICKSILVER.—The Board of Trade Returns for September are as follows:—

| | 1883. | | 1884. | | 1885. |
|---|---|---|---|---|---|
| Imports—September ....Bottles | 55 | ..... | 500 | ..... | 300 |
| ,, Nine months..... | 53,442 | ..... | 56,426 | ..... | 50,924 |
| Exports—September..... | 3,243 | ..... | 3,734 | ..... | 9,643 |
| ,, Nine months ..... | 35,509 | ..... | 39,477 | ..... | 40,711 |

These figures are very favourable, the lessened supplies and the larger exports for the nine months showing together an improvement of 6736 bottles in the statistical position, compared with last year. Only thrice have the monthly exports exceeded 6000, the highest previous record being 6489 bottles in August last.

The importers hold firmly for 6*l.* 2s. 6d,, but a small quantity from second hands has been sold at 6*l.*

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The MINING SHARE MARKET opened rather more briskly this week, and one or two mines were in good demand; but it soon settled down to the usual dulness prevailing of late, so that there has been very little variation in prices, and sellers have predominated. There appears to be very little business doing in mines in Cornwall just now, and this in a manner reacts on the market here, especially in the absence of buyers. In copper and lead shares scarcely anything has been done, but a few tin shares have been in fair request at better prices.

TIN has been firmer, and rather higher, but no change has been made in the standards for ore in Cornwall since the 10th of August. In shares, one or two mines, such as Dolcoath, East Pool, Wheal Grenville, and West Kitty as dividend mines, and a few other speculative mines, have been in fair demand. Blue Hills are quoted ¾ to 1; Carn Brea, 2¾ to 3¼; Cook's Kitchen, 10 to 10½. Dolcoaths have been firm at 72 to 74; a dividend equal to the last is expected at the meeting on Monday. East Pool, 45½ to 46½ ex div.; at the meeting the accounts showed a profit of 8390*l.* on three months' working, and a dividend of 1*l.* 5s. per share, or 800*l.*, was declared, leaving a credit balance in hand of 2082*l.*, everything being charged up in the accounts. The sales of ores, which are various in this mine, consisted of—tin (354 tons), 17,512*l.*; tin halvans, 171*l.*; copper, 192*l.*; wolfram, 903*l.*; arsenic, 572*l.* The total credits for the three months were 19,484*l.*, while the costs are comparatively low for such an extensive mine. The agent valued the 200 level west, on the caunter lode, at 80*l.* per cubic fathom, or 190*l.* for its full width. The winze in the bottom of the 190 north 40*l.* per fathom, is in advance of this end, and improving as it goes down; now 5 fms. deep.

East Blue Hills have been pretty firm at 27s. 6d. to 30s.; Killifreth, 10s. to 13s.; New Kitty, 14s. to 16s.; Prince Royal, 4s. to 6s.; South Condurrow, 6½ to 7. South Frances have not been so firm, and leave off 8½ to 8¾. Tincroft, 6 to 6½; Trevaunance, 2½ to 2¾. West Frances rather weaker at 8 to 8½. West Basset, 2 to 2¼. West Kitty have been firmer, at an advance to 8, 8½. Wheal Agar, 18¾ to 19½; Wheal Basset, 6 to 6½. Wheal Grenvilles have advanced to 12½, 13. Wheal Kitty (St. Agnes), 10s. to 12s. 6d.; Wheal Metal and Flow, ¾ to 1; Wheal Peevor, ⅝ to ¾. South Croftys have advanced to 6¾, 7¼; this is understood to be on the strength of the East Pool lode. Carn Camborne, ⅛ to ⅜; Goodevere, 1 to 1¼; Phœnix, 1½ to 1¾; Yeoland Consols, par to ¼ prem: Par Tin, 1 to 1¼; West Godolphin, 1⅛ to 1⅜; West Polbreen, ½ to ¾; Polberro, 1¼ to 2½.

COPPER is still lower, and there is scarcely anything doing in copper shares, which remain mostly unsaleable and at mere nominal quotations. Bedford United, 2s. 6d. to 5s.; Devon Great Consols, 1¾ to 2¼; Gunnislake (Clitters), ⅛ to ⅜; Mellanear, ¾ to 1; West Seton, 4½ to 5; Wheal Crebor, ⅛ to ¼; no change here, but the price of copper affects all mines alike. Prince of Wales, 6s. to 8s.; at the meeting, particulars of which will be found in another column, the accounts, which brought in the 13th month, thus showing five months' costs, against four months' returns, and balance of liabilities over assets of 900*l.* 14s. 5d. A call of 1s. 6d. per share, or 900*l.*, was made. The report is satisfactory for tin, and a special report by Captain Nance was read to the meeting, showing that a discovery of wolfram has been made, which might prove of great value to the property. The shaft will now be sunk in the new tin lode, proving it as it goes down to the junction of the main lode, and it can be sunk easily and quickly. It was stated at the meeting, in reply to a question, that every known liability was charged up in the accounts presented, and included in the debit of 900*l.* South Caradon, ⅛ to ¼.

LEAD keeps steady, but there is very little doing in shares, and quotations merely nominal. Vans are quoted 1⅞ to 1¾. Good progress is being made in driving the 150 cross cut towards the lode. Roman Gravels, 3¾ to 4¼; Leadhills, 2¼ to 2¾; Great Laxey, 9½ to 10; Ecton, 1⅛ to 1⅜; D'Eresby, 1¼ to 1½, fully paid. The lead ore referred to last week fetched 7*l.* 13s. 6d. per ton, and not 7*l.* 3s. 6d., as stated. The mine continues to look well. New Langford, 1s. to 2s. At the meeting a call of 1s. per share (600*l.*) was made. The accounts for five months show a balance of liabilities over assets of 259*l.* 17s. 3d. Weardale, 1¼ to 1⅜. The new engine has been started at Killhope Mines belonging to Weardale Company, and a rich mine is anticipated. Gwern-y-Mynydd, ⅛ to 1½. The amount asked for has, we are informed, been practically subscribed for, and this company will go to allotment next week. Craven Moor, 8s. to 10s.; Great Holway, 1¼ to 1½; Minera, 5 to 7; South Darren, 7s. to 9s.; Home Mines Trust, ⅝ to ¾; Standard Lead, 1¼ to 1⅜.

FOREIGN MINES are quiet, and very little business doing in them. Almada and Tirito, 3s. to 4s.; Bratsberg, 5s. to 7s. 6d.; Chontales, 2s. to 3s.; Callao Bis, 4s. 6d. to 5s. 6d.; Cape Copper, 20 to 21; Chili Gold, 6s. to 7s.; Colorado, 2¼ to 2½; Columbian Hydraulic, 9s. to 11s.; Copiapo, 2½ to 2¾; Frontino and Bolivia, 11s. 3d. to 13s. 9d.; Hoover Hill, 6s. to 8s.; La Plata, 4s. 6d. to 5s. 6d.; Mysore, 1⅞ to 2⅛; Montana, 2¼ to 2½; Organos, 7s. to 9s.; Orita, 20s. to 25s.; Oscar, 3s. 6d. to 4s. 6d.; Panulcillo, 1⅞ to 2⅛; Richmond, 3 to 3½; Santa Barbara, 1 to 1⅛; St. John del Rey, 60 to 65; United Mexican, 2¾ to 2½; Schwab's Gully, 3¼ to 3½; Violeta, 1 to 1¼; Nundydroog, 8s. to 10s.; Nouveau Monde, 1s. 6d. to 2s. 6d.; New Emma, 3s. 6d. to 4s. 6d.; Birdseye Creek, 1⅛ to 1¼. The agent announces by cable a clear up at Uncle Sam's with a gross return of $9500, and a remittance of $3000.

# Mining Notes.

At Pedn-an-drea United Mines the lode has been intersected at the 120 fm. level, east of the cross-course, 3 ft. wide, worth 20*l.* a fathom, and tinny throughout. This is a very important point for the future of this mine, and has been looked forward to for some time past with a considerable degree of interest by the shareholders. This mine will, it is said, show a good profit at the next meeting.

Pedn-an-drea, during the past month, sold 13 tons of tin. This hardly pays costs, but as lately the mine has steadily improved it is hoped costs will shortly be met. In the course of a ew days drawing will be commenced from the 140.

The manager of the New Chile Gold Mining Company (Limited) reports four samples of quartz taken from the bottom of the shaft upon Austin No. 9 to have assayed the following results, viz.:—6 ozs. 2 dwts. 19 grs.; 3 ozs. 19 dwts. 16 grs.; 2 ozs. 5 dwts. 2 grs.; 2 ozs. 3 dwts. 2 grs., showing an average of more than 3½ ozs. to the ton, and adds that there is not one particle of truth in the statement that there is any dispute as to the validity of the title held by this company to the Austin concession Nos. 8 and 9, which are fully acknowledged by the Government, and further that the company have large claims against certain persons, which they find it futile to attempt to enforce, being satisfied that they cannot recover the same. The manager further writes that the new hoisting engine will be at work in a few days, and that the prospects of steadily increasing returns are assured.

The directors of the De Beers Mining Company have declared a dividend of 6s. per share for the quarter ended September 30, being at the rate of 12 per cent. per annum.

The directors of the Nerbudda Coal and Iron Company state that it is with deep regret they have to report the following telegram received from the manager in India:—"Whole area present workings subsided. Helen dangerous; workmen unarmed; cannot know damage yet. Output stopped; position serious; must see board. Donkin acts three months. Ready start; wire permission; leave family." No direct opinion can be formed of the cause of the catastrophe; but it is conjectured, from advices to hand, that the subsidence is in the workings of No. 2 seam, No. 2 shaft, where the pillars in the Breken have been reduced. The directors have telegraphed for further particulars, and think, in the absence of more explicit information, that the manager's presence in India will be of more advantage to the company at present than his return to England; at any rate until such further nformation has been received.

The Blackwell Colliery Company have just completed arrangements for opening a colliery outside the town of Alfreton in Derbyshire. It is confidently expected that the new pit will represent a possible output of about 800 tons per day, and already plans have been submitted for the enlargement of the Midland Railway station there, and the construction of a branch line.

Camborne Vean will not be reconstituted just yet as Dolcoath West. The 70,000*l.* capital which Mr. Fidler desired to obtain he found impossible to raise, and at a meeting of shareholders, on Wednesday, he reported he was convinced it was out of the question to float any companies at the present moment. Mr. R. S. Teague, the purser, did not resign, as was provided for in the circular, Mr. Vivian, of Hayle, pointing out that Mr. Teague having been made co-liquidator with Mr. Fidler, he could not see how the resignation could be accepted. This suggestion found acquiescence. The outstanding assets in the way of calls are about 600*l.*, which sum represents the liability of the mine. Nearly the whole of the calls are believed to be good.

Some time since we remarked that it was reported in the St. ust district that a London company was prepared to re-start Balleswidden Mine—that it was conjectured that this abandoned sett held out excellent prospects of success in the event of vigorous prosecution. So far nothing has come of the report, and we fear that the people of the district have been disappointed. This is quite natural. That there is reason to believe the investment would prove a satisfactory one most local people believe. And the grounds for this belief should be stated. It is known that Mr. Alfred Lanyon, who purchased the sett, when sold, made a good thing out of the leavings on the floors, and it is pretty earnestly asserted that, just prior to the closing of the mine, many miners were engaged in covering up good tin-bearing ground. More than this we will not say. St. Just people are of opinion, we unhesitatingly declare, that Balleswidden is a more promising mine for permanency—though abandoned—than any concern at work in the district. The present lord, we hear, is actually prepared to grant a lease, for a term of years, without any dues whatever. Well done Mr. Millett. You are prepared to encourage Cornwall's greatest industry, going further than many lords have shown themselves willing to go in the very recent past.

West Basset, after having seen a comparatively long period of adversity, has at last made a profit, though it is at most a small one. Still, this is far better than a loss, and Capt. Nicholas believes he will be able to continue increasing the returns, the mine having generally improved.

Wheal Jane, with the closing of which the name of Lord Falmouth has been very freely used, in the Mining Division, was, on Wednesday, thrown into the Stannaries Court. It would seem there is the sum of more than 2000*l.* outstanding in calls, and the step taken has been necessary to at least strive to make the defaulters pay.

Financially the statement at South Frances, on Thursday, was disappointing to committee, agents, and shareholders. Last time there were good reasons for anticipating that the past four months would show a respectable profit, a profit sufficiently ample to admit of at least a 5s. dividend. And we have on several occasions during the past 16 weeks been informed by as good an authority as we would have wished that the dividend could not be smaller than 5s. Capt. Craze explained the causes clearly enough. While the profit was only just over 300*l.*, no less than 700*l.* was spent in dead-work at Daubuz's, and he anticipated that soon they ought to find this part of the mine self-sustaining. It is to be hoped the returns will be increased during the coming four months.

East Pool account was eminently satisfactory. The dividend anticipated has been given, all shareholders have been pleased, and, what is better, nearly 400*l.* has been added to the reserve fund. This fund—would there were more in Cornish mines—has now assumed respectable proportions, and the idea of the purser is to get such a fund accumulated as shall enable him to be independent, for the future, of bankers' charges in the shape of interest, and to pay for everything, and thus receive discount. Captain Bishop's report, written and verbal, was of the usually cheerful character.

The directors of the New Potosi Mining Company have received the following telegram from the mine:—251275 ozs. of gold remitted. Have decided to sink the main shaft. Mill will be ready to re-start on 26th of the month (September).

The directors of the Ruby and Dunderberg Mining Company have received the following telegram, dated the 6th inst., from the mine:—21 tons tribute ore shipped and 5 tons tribute ore smelted, producing to company $27. Received for ore shipped on company's account, $910. N.B.—In another telegram from Eureka the manager reports that the outturn from the Lord Byron will be increased as soon as the bottom level has been advanced about 30 ft.

The directors of the New Hoover Hill Gold Mining Company have received the following telegram from the manager at the mine:—Result of milling for the month of September, 714 tons of ore crushed, producing 334 ozs. of gold; approximate value, $5400.

The directors of the United Mexican Mining Company have received t following telegram:—The excess of returns over outlay on he mine of San Cayetano de la Ovejera for the week ending October 3, is $4259. Lower ley.

The Richmond Consolidated Mining Company have received the following cablegram from the mine at Eureka, Nevada:—Week's run (one furnace), $16,000 from 288 tons of ore. Refinery, $15,000.

The following resolutions have been passed and confirmed at meetings of the shareholders of the Plas-y-Nant Slate and Slab Quarry Company (Limited):—"That the proposal or offer of the tack-note holders be accepted, that is to say—that the remaining unpaid capital of the company be called up, and the balance thereof, after paying the debts and liabilities of the company and the costs of winding up, be divided equally amongst the shareholders of the company *pro rata*, and that the tack-note and plant be sold, and the proceeds divided amongst the shareholders *pro rata* also. The shares to be entitled to this division to include those which were originally intended to be allotted to the tack-note holders in payment of the balance of the purchase-money for their interests in the tack-note of the quarry.—2. That the company be wound up voluntarily and dissolved, under the provisions of the Companies Acts, 1862 and 1867.—3. That William Margerison, of Ben Rhydding, near Leeds, solicitor (who is a member of the company), be appointed the liquidator."

Mr. J. Macdonald Cameron, mining expert and metallurgist, of 52, Lime-street, E.C., has been invited by the advanced section of the Liberal party in Wick Burghs to contest the seat against Mr. John Pender, the sitting member, at the forthcoming election.

The Rio Tinto Company (Limited) have declared an interim dividend of 6s. per share, payable on November 3rd next.

Resolutions have been passed to wind-up voluntarily the Milford Haven Shipbuilding and Engineering Company (Limited) with Mr. George Williamson, of 87, Mosley-street, Manchester, as liquidator.

East Botallack Mine, St. Just, with machinery and plant thereon, is to be sold as a going concern in one lot on the 19th inst.

The directors of the Mysore Gold Mining Company have received a telegram from Capt. Plummer, dated October 5th, giving the month's return of gold as follows:—188 tons rich quartz from bottom of the mine produced 558 ozs., and 18 tons blanket sands produced 23 ozs. Total, 206 tons ore, yielded 581 ozs. gold.

A strike is reported in the Colorado United Mining Company's property, where rich ore running as high as 600 ozs. to the ton has been encountered in the winze connecting the 13th and 14th levels. There is now ore east and west of the main shaft, which is being driven on at five different points.

Whether Mr. J. Claude Daubuz, of the Carvedras Smelting Works, will startle his brother tin-smelters by a speech he made at West Basset meeting, on Thursday, time will show. He did not startle his smelting friend, Mr. T. Robins Bolitho, who was also present. But Mr. Daubuz has the courage of his convictions, and he has definitely asserted that there should be a duty on the tin imported into this country. Mr. Daubuz would exempt our colonies in the matter of what they send us, but as general policy unless the foreigner admitted English goods free the goods of the foreigner should not be permitted to enter English ports free. Mr. Daubuz refers to the copper trade, directs attention to what it was in Cornwall in the past, and predicts that in ten years' time, unless something be done, disaster will overtake the Cornish tin mines. Cornish people could not go on as they had been in recent years. If matters did not mend, Cornish mines must shut up. Some 18 months ago another Cornish smelter, Mr. Field, ridiculed a duty on tin.

It is very probable that the discussion at East Pool account about the increase in the salaries of the sub-agents will be a theme of discussion for some little time to come. The incident has most certainly been largely discussed during the past week in local mining circles. Any friction might have been easily avoided. Mr. Henry Rogers, and the meeting generally, can be understood to have felt that the under-agents had been overlooked upon the committee recommending an increase in the salary of Captain Bishop, the manager, and saying nothing as to Captain Penhale and Captain Curtis. And Mr. Rogers had the majority of those present with him in desiring that the agents should all benefit. Mr. Branwell, as a member of the committee, felt that no one outside the committee should make a proposition. Upon this point the conversation between Mr. Rogers and Mr. Branwell became heated. We think it would be unwise to lay down the principle that, inasmuch as there is a committee, no resolutions for any new departure shall be made by any shareholder, however influential he may be. Nor did the meeting fall in with Mr. Branwell's view in this repect. However, if the committee had suggested that the question of the salaries of the under-agents was under consideration—as was the case—all would have been well. And, too, had Mr. Rogers put his resolution in the form of a suggestion to the committee, or asked the gentlemen constituting it if the sub-agents were to have their case debated, all would have gone off merrily. The result was a pretty storm in a teapot, and most people think that on so trivial a matter as a sum just over 20*l.* yearly to two responsible men might have been voted on the spot.

A call of 1s. per share was made at the meeting of Polcrebo, held on Thursday. Every effort seems being made to open up the mine in an energetic manner, and there seems reason to believe that the patience and perseverance of the adventurers will be crowned with success.

At the meeting of the Sierra Buttes Gold Mining Company, held on Thursday, dividends of 6d. per share on the Sierra Buttes shares, and of 1s. 6d. per share on the Plumas Eureka shares were declared. Mr. Tendron, who presided, was able to give a generally satisfactory account of the position and prospects of both mines. The properties are being properly developed, and the prospects seem to fully warrant the expectation that a steady yield will be maintained, whilst the financial position of each mine is eminently satisfactory.

The shareholders of the Lisbon-Berlyn Company do not show any great alacrity to subscribe the fresh capital required.

The unusual scene was witnessed yesterday of a gentleman carrying a large bar of gold on his shoulder through the streets to deposit it in one of the banks, and the astounding size of the valuable burden excited additional curiosity among observers. The party in charge of it was Mr. T. N. Baker, superintendent of works at the New Albion Company's mines at Montagu, from which the gold had just been brought to the city. The bar weighed 1054½ ozs., being the product of 14 days' crushing in the company's 12-stamp mill, and was worth $20,618. After deducting the cost of producing the gold, a profit of about $19,500 remains. The bar is the largest ever seen in Nova Scotia.—Halifax *Morning Chronicle*, September 22.

At the Mackworth Hotel, Swansea, on Saturday last, the most successful meeting ever held in connection with the tin-plate trade took place. Mr. James Spence (the President) occupied the chair, and no less than 52 works were represented. The President said he had not heard of a single case of infraction or evasion of the existing agreement to restrict the make of tin-plates, and he believed it had been faithfully carried out by all. He then replied to the various arguments put forth by those who opposed the movement, and added that there were now in operation in Wales and Gloucestershire 79 works having 367 mills, so that, with the important addition of that day, they had now 75 works and 354 mills in the combination, leaving but the trivial minority of four works having 13 mills outside it. Messrs. Rogers, Thomas, Tregoning, T. D. Daniel, T. Chivers, G. B. Strick, D. W. Williams, and others addressed the meeting, after which the following resolution was unanimously passed:—

That whereas the present agreement will terminate on the 31st December, it is now decided that it be continued from the 31st December to the 30th June next, on the basis of stopping one week in six during the additional half-year ending June 20th, 1886.

n the motion of Mr. Rogers, it was decided that a contribution of 2*l.* per mill be made for the purpose of presenting a testimonial to Mr. Spence as a mark of their appreciation of his unwearied efforts to bring about unity of action and rally the trade out of the depression into which it had fallen.

Considerable interest was awakened at Birmingham on Thursday by the startling statement that Messrs. Nettlefold's (Limited) have determined to transfer the whole of their iron, steel, and wire-rod business, as now carried on at their Castle Ironworks, Wellington, to South Wales. An extensive site has been purchased some 5 miles from Newport, where new works will be erected. The Castle Works will be wholly closed, and will be offered for sale. The reason for this action is the excessive railway rates charged for conveyance of manufactured goods and raw materials to and from the coast. The Castle Works were erected some 10 years ago, at a cost of 60,000*l.* to 80,000*l.*, and 40,000*l.* has also been expended on collieries. This removal is the most important which has occurred since the recent action of Messrs Cammell.

Roman Gravels Mines, in driving the several levels north and south of new shaft, continue to look well, and in the bottom levels some discoveries of lead ores are likely to be made according to the present indications. The agent writes he has sampled 100 tons lead ore for sale next week.

The directors of the Russell Gold Mining Company announce that the first shipment of bullion from the mine was made this week.

Leadhills Mines are reported to look well in the several levels north and south of Jefferies' and Wilson's shafts, and most of the surface improvements in the buildings and dressing-floors are in a forward state of completion.

At Devon Great Consols the indications at the Wheal Maria part of the mine improve as depth is attained, as well as at Watson's, and in Wheal Emma deepest level are considered to be of a very favourable character for meeting with some good discoveries of copper, tin, and mundic. The sampling this month is 750 tons of ore.

## THE IMPORTATION OF BELGIAN GIRDERS.

A paragraph has been going the rounds of the papers calling attention to the fact that large quantities of Belgian girders are being imported into this country at 1*l.* per ton less than our own manufacturers are able to produce them. This is nothing new, for Belgium, which imports large quantities of pig from England, sends us back in return the manufactured article in the shape of girders and other rolled iron, and this has been the case for more than a dozen years. Labour is certainly dearer in this country than what it is in Belgium, but that is not the reason why the Belgian manufacturers are able to undersell our own, and that, too, in our own markets. Some time since Mr. Alp. Thomas, the chief engineer to one of the largest rolling establishments in Belgium, on making known at a meeting in England, what he termed one of the secrets often asked as to how the Belgians managed to undersell the British on their own markets in respect to beams, girders, and profile iron, attributed it in a great measure to the superiority of the mills, by which great economy in production was obtained. The Belgian three-high rolling mills are divested of what are known as double collars, whilst the top roll is cast with grooves on one-half of its length only, the remainder being plain and made conical. The bottom rail is also cast with grooves on one-half the length, the remainder being left taper, or conical, or it can be done away with altogether. By this means, we are told, there is an economy of 40 to 100 per cent. in the weight of castings required for the rolls as compared with the older kinds, to which has to be added 50 per cent. saved in the turning and repairing. The system allows of two-high being made into three-high trains, the number of side guides being reduced one-half as compared with other three-high trains, whilst the comparative lightness of the rolls gives increased rapidity in the mounting and changing of them. Mr. Thomas gave it as his opinion, that by the system alluded to the economy practically obtained in the working was equal to about 4 frs. per 100 kilos. of profile or angle iron produced, or equivalent to about 1*l.* 12s. per ton. This resulted from the fact that no matter what the profile of the iron was it was rolled at one heat to a very great length, saving ends and without occasion for bars in piling. There was a saving in the cost of re-heating and economy as regards the waste ends. It will be seen that the question of cheap girders is really a manufacturer's one, and that there is no reason why they should not be made as cheap in England as they are in Belgium. We have the same raw material at a lower price, and what is required is the same economy in the mode of production, which would probably require an outlay for new plant and alterations. But until our manufacturers are able to sell as low as their foreign competitors Belgian girders will continue to be purchased for English purposes, for the cheapest markets are those to which consumers and purchasers of every description of goods are certain to go, and wisely they act in so doing.

# STOCK AND SHARE LIST.

## BRITISH DIVIDEND MINES.

| Shares. | | Paid. | Last wk. | Clos. pr. | Total divs. | Per sh. | Last pd. |
|---|---|---|---|---|---|---|---|
| 2000 | Bedford Unit.,* c, Tavis.(£1 liab.).. | 0 14 0 | ⅜... | 2s 6d 5s | 0 1 0 | 0 2 6 | Nov. 1884 |
| 8000 | Carn Brea, c, t, Illogan†§ | 15 6 5 | 3½... | 2¾ 3¼ | 92 11 | 10 0 | Nov. 1881 |
| 4000 | Craignant Bach,* l, Cardigan | 5 0 0 | — | ... | 0 5 0 | 0 5 0 | Nov. 1882 |
| 10740 | Devon Gt. Consols, c, a, Tavistock*† | 1 0 0 | 2¼... | 1¼ 2½ | 118 7 | 0 0 8 | Dec. 1880 |
| 4700 | Dolcoath, c, t, Camborne | 10 14 10 | 74 | 72 74 | 44 4 | 5 1 10 | July 1885 |
| 6400 | East Pool, t, c, Illogan | 0 9 9 | 46½ | 45½ 46½ | 45 11 | 6 1 5 | Oct. 1885 |
| 12000 | Great Holway,* l, Flintshire | 5 0 0 | 1¾... | 1¾ 1⅝ | 9 12 | 0 0 7 | Sept. 1883 |
| 15000 | Great Laxey, l, Isle of Man*† | 4 0 0 | 10 | 9½ 10 | 30 13 | 0 0 5 | Apr. 1885 |
| 6400 | Green Hurth, l, Durham* | 6 6 0 | 5½ | 4¾ 5 | 5 1 | 0 0 5 | Dec. 1884 |
| 9820 | Gunnislake (Clitters), t, c | 2 2 0 | 5s... | ⅛ ¼ | 0 19 | 9 0 2 | Mar. 1882 |
| 14000 | Isle of Man, l, Isle of Man* | 5 0 0 | — | ... | 83 7 | 0 0 2 | May 1885 |
| 6800 | Killifreth, t, Chacewater§ | 4 13 6 | ⅛... | ⅛ ⅛ | 0 14 | 6 0 2 | Nov. 1881 |
| 20000 | Leadhills,* l, Lanarkshire | 6 0 0 | 2½... | 2¼ 2⅜ | 1 10 | 6 0 3 | Sept. 1885 |
| 12500 | Levant, c, t, St. Just | 11 5 0 | — | ... | 9 2 | 6 0 2 | May 1882 |
| 400 | Lisburne,* l, Cardiganshire | 18 15 0 | — | ... | ...615 | 0 0 0 | June 1885 |
| 10000 | Mellanear, c, Hayle* | 2 0 0 | 1 | ¾ 1 | 2 4 | 0 0 0 | Apr. 1885 |
| 9000 | Minera Mining Co., l, Wrexham* | 5 0 0 | 7 | 5 7 | 69 14 | 2 0 0 | Aug. 1884 |
| 8000 | Mining Co. of Ireland, cl, c, l* | 7 0 0 | 1⅛... | 1 1⅛ | 24 0 | 0 0 2 | Jan. 1880 |
| 1829 | North Hendre, l, Wales | 2 10 0 | — | ... | 3 18 | 0 0 4 | Nov. 1882 |
| 6146 | Ditto | 1 7 6 | — | ... | 0 11 | 3 0 2 | Nov. 1882 |
| 12000 | Phœnix United, t, c, Linkinhorne§ | 6 6 6 | 1¼... | 1¼ 1¼ | 17 7 | 6 0 1 | Apr. 1883 |
| 12000 | Roman Gravels, l, Salop* | 7 10 0 | 4 | ... 3¾ | 4½ | 9 16 0 | 0 2 6 | July 1885 |
| 6123 | South Condurrow, t, c, Camborne† | 7 5 7 | 7 | ... 6¾ | 7 | ... 12 | 1 6 | 0 5 0 | Aug. 1885 |
| 8000 | South Darren, l, Cardigan* | 1 10 0 | 10s... | 7s. | 9s. | 0 4 | 0 0 2 | 0 0 | Apr. 1880 |
| 6000 | Tincroft, c, t, Pool, Illogan†§ | 14 18 6 | 6½ | ... 6 | 6½ | 51 3 | 6 0 5 | 0 0 | Dec. 1881 |
| 6000 | West Basset, c, f, Illogan†§ | 8 3 4 | 2½ | ... 2 | 2¼ | 28 3 | 8 0 2 | 6 0 | July 1885 |
| 4000 | West Kitty, t, St. Agnes | 0 12 0 | 8 | ... 8 | 8½ | 4 18 | 0 0 10 | 0 0 | July 1885 |
| 4800 | Wheal Agar, t, Illogan | 19 6 0 | 19 | ...18½ | 19½ | 2 5 | 6 0 7 | 6 0 | Aug. 1885 |
| 12000 | Wheal Crebor, c, Tavistock | 2 4 0 | 1 | ... ⅝ | ⅞ | 1 1 | 3 0 1 | 0 0 | July 1885 |
| 1024 | Wheal Eliza Consols, t, St. Austell | 18 0 0 | — | ... | ... | 59 10 | 0 0 10 | 0 0 | Aug. 1884 |
| 4800 | Wheal Grenville, t, Camborne | 15 0 0 | 12¾ | ...12½ | 13 | 3 0 | 0 0 7 | 6 0 | Sept. 1885 |
| 4295 | Wheal Kitty, t, St. Agnes§ | 5 12 0 | ¾ | ... ½ | ¾ | 12 18 | 6 0 1 | 6 0 | Jan. 1881 |
| 3000 | Wheal Peevor, t, Redruth§ | 1 12 0 | ⅜ | ... ¾ | ⅝ | 9 3 | 6 0 | 10 0 | Aug. 1815 |

## FOREIGN DIVIDEND MINES.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9000 | Alamillos, l, Spain*† | 2 0 0 | 1½ | ... 1¼ | 1½ | 2 17 | 11 | 0 1 | 3 | Mar. | 1885 |
| 130000 | Almada and Tirito Consol., s*† | 1 0 0 | 9/16 | ... 1/16 | 9/16 | 0 6 | 3 | 0 1 | 0 | May | 1876 |
| 20000 | Australian, c, South Australia† | 7 7 6 | 2 | ... 1½ | 2 | 1 13 | 0 | 0 2 | 0 | July | 1885 |
| 15000 | Birdseye Creek, g, California* | 4 0 0 | 1¼ | ... 1 | 1¼ | 1 11 | 0 | 0 2 | 0 | June | 1885 |
| 30000 | Brataberg,* c, Norway† | 2 0 0 | ⅛ | ... ¼ | ⅜ | 0 4 | 4½ | 0 1 | 2½ | Mar. | 1884 |
| 30000 | California,* g, Colorado | 1 0 0 | 3/6 | ...5s. 6 | 3s 6 | 0 3 | 0 | 0 1 | 0 | Aug. | 1884 |
| 20000 | Cape Copper Mining,*† South Africa | 0 0 0 | 23 | ...20 | 21 | 62 7 | 6 | 0 10 | 0 | Sept. | 1885 |
| 65000 | Colorado United, s-l Colorado*† | 5 0 0 | 2⅝ | ... 2¼ | 2½ | 3 14 | 6 | 0 1 | 0 | May | 1885 |
| 60000 | Copiapo, c, Chili* (£4 shares)† | 3 13 0 | 3 | ... 2½ | 2¾ | 2 10 | 9 | 0 1 | 0 | Sept. | 1885 |
| 32200 | El Callao, g, Venezuela | 40 0 0 | 70 | ...65 | 70 | 36 19 | 4 | 0 3 | 4 | July | 1885 |
| 70000 | English & Australian,*† c, S. Aust. | 2 10 0 | — | ... | ... | 3 2 | 9 | 0 1 | 0 | Mar. | 1884 |
| 3000 | Eng.-Aus., g, Vict.* pref. (20000 o.) | 1 0 0 | — | ... | ... | 0 3 | 8 | 0 3 | 8 | Apr. | 1882 |
| 85000 | Fortuna, l, Spain*† | 2 0 0 | 3½ | ... 2¾ | 3¼ | 9 0 | 4 | 0 3 | 3 | Oct. | 1885 |
| 72000 | Frontino & Bolivia, g, New Gran.*† | 1 2 0 | ¾ | ... ⅝ | ¾ | 3 12 | 0 | 0 1 | 0 | Dec. | 1883 |
| 400000 | La Plata, s-l, Leadville† | 1 0 0 | 5/6 | ... 4/6 | 5/6 | 0 6 | 6 | 0 0 | 7½ | Oct. | 1882 |
| 100000 | La Trinidad, *s, Sonora, Mexico | 5 0 0 | 6½ | ... 5½ | 5¾ | 0 10 | 0 | 0 5 | 0 | Aug. | 1885 |
| 15000 | Linares, l, Spain*† | 3 0 0 | 4¼ | ... 3¼ | 4¼ | 20 0 | 4 | 0 3 | 6 | Oct. | 1885 |
| 20000 | Marbella Iron Ore, *, Spain | 10 0 0 | 2¼ | ... 1¼ | 2⅛ | 0 10 | 0 | 0 10 | 0 | June | 1882 |
| 115164 | Mason & Barry*,c, Portugal | 10 0 0 | 7⅞ | ... 7 | 7¼ | 4 7 | 0 | 0 4 | 0 | Oct. | 1885 |
| 600000 | Montana,* g., U.S.A. | 2 0 0 | 2⅝ | ... 2¼ | 2½ | 0 0 | 8 | 0 0 | 8 | July | 1884 |
| 60000 | New Albion, g, Nova Scotia | 1 0 0 | 2 | ... 1½ | 2 | 0 1 | 0 | 0 1 | 0 | Sept. | 1885 |
| 120000 | New Hoover Hill, g, North Carolina. | 0 10 0 | — | 8s. | 8s. | 0 0 | 3 | 0 0 | 3 | May | 1885 |
| 125000 | Oxford, g, Nova Scotia | 0 4 0 | ⅜ | ... ¼ | ⅜ | 0 1 | 3½ | 0 0 | 1¼ | Mar. | 1884 |
| 80659 | Quebrada Rail., Land, & Cop. Venezuel | 10 0 0 | 3½ | ... 3 | 3½ | — | 6 per cent. | | ... | | 1882 |
| 50000 | Panuelillo, c, Chili*† | 4 0 0 | 2⅛ | ... 1⅞ | 2⅛ | 2 2 | 9 | 0 2 | 0 | May | 1884 |
| 25000 | Pitangui,* g, Brazil (in. 6000 £1 pd). | 0 18 0 | ⅝ | ... ½ | ⅝ | 0 1 | 0 | 0 1 | 0 | Sept. | 1880 |
| 14000 | Pontgibaud, s-l, France† | 20 0 0 | 5½ | ... 4½ | 5½ | 30 3 | 1 | 0 11 | 3 | Dec. | 1883 |
| 100000 | Port Phillip, g, Clunes*† (£1 5s. sh.) | 1 0 0 | 1/16 | ... | 1/16 | 1 14 | 2 | 0 0 | 10 | Feb. | 1881 |
| 250000 | Rara Fortuna,* s, Argent. Republic. | 1 0 0 | — | ... | ... | 0 3 | ... | 0 1 | 0 | July | 1882 |
| 54000 | Richmond Consol., s, Nevada*† | 5 0 0 | 3½ | ... 3¼ | 3½ | 15 1 | 6 | 0 5 | 0 | Nov. | 1884 |
| 25000 | Rio Tinto,*c, Mortgage Bds., Huelva. | 100 0 0 | 97 | ... 95 | 97 | ... | 5 per cent. | | ... | Apr. | 1885 |
| 325000 | Ditto, shares | 10 0 0 | 9 | ... 8¼ | 9 | 5 2 | 0 | 0 0 | 6 | Oct. | 1885 |
| 50000 | Santa Barbara,* g, Brazil | 0 10 0 | 1¼ | ... 1 | 1¼ | 0 12 | 9 | 0 1 | 0 | May | 1882 |
| 122000 | Schwabs Gully,*d, Kimberley | 10 | 3½ | ... 3¼ | 3½ | 6 10 | 6 | 0 10 | 0 | Jan. | 1885 |
| 120000 | Scottish-Australian Mining Co.*† | 1 0 0 | 3½ | ... 2¾ | 3 | 20 p. cent. | | 0 2 | 0 | Oct. | 1884 |
| 80000 | Ditto, New | 0 10 0 | 1½ | ... 1¼ | 1½ | 20 p. cent. | | 0 1 | 0 | Oct. | 1884 |
| 122500 | Sierra Buttes, g, California*† | 2 0 0 | 1 | ... ¾ | 1 | 2 8 | 0 | 0 0 | 6 | Oct. | 1885 |
| 14062 | Ditto, Plumas Eureka | 2 0 0 | 1½ | ... ⅞ | 1½ | 3 6 | 6 | 0 1 | 6 | Oct. | 1885 |
| 1252.0 | Silver Queen Unit., * s, Sonora, Mex. | 2 0 0 | 2½ | ... 2⅛ | 2⅛ | 0 2 | 0 | 0 2 | 0 | Aug. | 1885 |
| 2:3000 | St. John del Rey*†(£5 Stock and multiple dealt in) | | 60 | ... | 65 | ... | 5 p.c. (for half-year, June | | | | 1882 |
| 180000 | Tambraclierry,* g, Wynaad | 1 0 0 | ¾ | ... ½ | ¾ | 0 0 | 6 | 0 0 | 6 | Aug. | 1882 |
| 625000 | Tharsis,*c, sul, Spain (587330 issued)† | 2 8 0 | 4½ | ... 3½ | 4 | 7 6 | 6 | 0 8 | 0 | May | 1885 |
| 14000 | Tolima,* g, Columbia (Ashares)† | 5 0 0 | 3½ | ... 2 | 3 | 6 2 | 2 | 0 5 | 0 | Jan. | 1885 |
| 6000 | Ditto (B shares) | 5 0 0 | 2¼ | ... 2 | 2¼ | 1 5 | 3 | 0 5 | 0 | Jan. | 1885 |
| 125175 | United Mexican,*†‡ s, Mexico | 9 17 6 | 2½ | ... 2¼ | 2½ | 0 7 | 6 | 0 2 | 6 | Aug. | 1885 |
| 25000 | Victoria* (London), g, Australia | 1 0 0 | 3/6 | ... 2/6 | 3/6 | 0 13 | 10 | 0 0 | 8 | Feb. | 1881 |
| 15000 | Western Andes, s, Colombia | 5 0 0 | 4½ | ... 4 | 4½ | 4 16 | 3 | 0 10 | 6 | Aug. | 1884 |
| 2100 | W. Prussian (5500 pref. sh. £10 pd.) | 10 0 0 | — | ... | ... | 4 2 | 0 | 0 8 | 0 | Apr. | 1881 |
| 54800 | Yorke Pen., c, South Aust. Pref.† | 1 0 0 | ⅛ | ... ⅛ | ... | 0 3 | 0 | 0 3 | 0 | May | 1882 |

§ Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

| Shares. | | Paid. | Last wk. | Clos. pr |
|---|---|---|---|---|
| 12000 | Anderton, t, c, l, Devonshire | 0 6 | 0... | 1⅝... ⅞ 1⅝ |
| 12000 | Assheton, l, Carnarvonshire* | 5 0 | 8... | — ... |
| 3200 | Blue Hills t, c, St. Agnes§ | 8 | 6... | 1 ... ¾ 1 |
| 10000 | Brada,* l, Isle of Man | 0 | 0... | — ... |
| 30000 | British,* s-l, bl, Wrexham | 1 0 | 0... | — ... |
| 20000 | British Manganese Company* | 1 0 | 0... | — ... |
| 10000 | Burnhope,* l, Edmondbyers | 0 10 | 0... | 2¼... 1¾ 2¾ |
| 50000 | Cambrian,* l.c, Cardigan | 2 0 | 0... | — ... |
| 50000 | Carn Camborne,* t, c, Camborne | 1 0 | 0... | ¾ . ⅝ ⅝ |
| 37500 | Carnarvonshire Cons.,*l, Llanrwst. | 2 0 | 0... | 1/6... 1/16 3/16 |
| 6400 | Cashwell,* l, Cumberland | 2 19 | 0... | 1½... 1½ 1¾ |
| 10000 | Central Foxdale,* l, Isle of Man | 17 | 6... | — ... |
| 300000 | Clifford Amalgamated | 1 0 | 0... | 1¼... 1¼ 1¼ |
| 25000 | Coed-y-Fedw & Pant-y-Buarth,* l | 1 0 | 0... | ⅜... ⅜ ⅜ |
| 2450 | Cook's Kitchen, t, Illogan† | 42 0 | 9... | 10¾ ..10 10½ |
| 32007 | Craven Moor Uni.,* l. Pateley Bdge | 1 0 | 0... | ½... ⅝ ½ |
| 50000 | Creigiog,* l, bl, Denbighshire | 0 17 | 0... | ⅞... ⅜ ¾ |
| 36400 | Crook Burn,* l, Cumberland | 0 17 | 0... | — ... |
| 12000 | D'Eresby,*l, bl, Llanrwst. £1 share... | 1 0 | 0... | 1½... 1¼ 1½ |
| 60000 | Devon Friendship,* c, ars, Tavistock | 1 0 | 0... | 1/-... 6d. 1/ |
| 50000 | Drakewalls,* t, c Calstock | 0 15 | 0... | 3/-... 1/ 3/ |
| 50000 | Duchy Peru,* bl, l, s, Cornwall | 1 0 | 0... | 1⅛... ⅞ 1⅛ |
| 12000 | East Blue Hills, t, St. Agnes | 0 7 | 0... | 1⅛. 1⅜ 1⅝ |
| 6000 | East Botallack, t, St. Just | 1 2 | 6... | — ... |
| 6144 | East Caradon, c, St. Cleer† | 5 7 | 6... | — ... |
| 15000 | East Devon Cons.,* c. Buckfastligh. | 2 0 | 0... | ⅝... ⅛ ⅝ |
| 6000 | East Tregembo, t, c, Marazion | 0 6 | 5... | ⅜... ⅛ ⅜ |
| 2048 | East Wheal Lovell, t, Helston | 0 3 | 6... | ⅜... ⅛ ⅜ |
| 25000 | Ecton,* c, Wetton | 1 0 | 0... | 1¾... 1⅛ 1⅜ |
| 12500 | Frongoch,* l, Cardgn (11000 sh.iss.) | 2 0 | 0... | — ... |
| 12000 | Gawton,* c, Tavistock | 2 0 | 0... | ⅜... ⅛ ⅜ |
| 40000 | Glasg. Car.,c*[30000sh. £1 pd., 10000 15s. p l.] | | | ⅜... ⅜ ⅜ |
| 30000 | Gobbett,* l, Devon | 1 | 0 | 0... — ... |
| 10000 | Goddards,* l, o, Carnarvon | 1 | 0 | 0... — ... |
| 32000 | Goginan,* l, Cardiganshire | 1 | 0 | 0... ⅜... ⅛ ⅜ |
| 25000 | Goodevere, t, St. Cleer | 1 | 0 | 0... 1¼... 1 1¼ |
| 6000 | Great West Chiverton, t, St. Agnes. | 0 | 6 | 6... ½... ⅜ ½ |
| 50000 | Great W. Shepherds* l, Cornwall | 1 | 0 | 0... 1 ... ⅞ 1 |
| 20000 | Grogwinion, l, Cardigan* | 2 | 0 | 0... — ... |
| 10000 | Gwern-y-Mynydd,*s-l, Flint(pref.) | 4 | 0 | 0... ½... ⅞ 1⅛ |
| 8400 | Hardshins,* l, Westmore. (10s. sh.) | 0 | 7 | 6... 1 ... ½ 1 |
| 15000 | Holywell District, *l, Flintshire | 1 | 0 | 0... 1 ... ¾ |
| 15000 | Lady Ann,* s-l, Llanarmon | 1 | 0 | 0... — ... |
| 15000 | Llandegla,* l, Wales | 1 | 0 | 0... — ... |
| 5120 | Lovell, t, Wendron | 2 | 1 | 0... ⅜... ⅛ ⅜ |
| 9000 | Marke Valley, c, Linkinhorne† | 8 | 7 | 0... 3/-... 2/ 3/ |
| 3000 | Mona,* c, Anglesea | 5 | 0 | 0... — ... |
| 20000 | Mona Consols,* c, Anglesea | 1 | 0 | 0... — ... |
| 20000 | Mostyn Consols,* s-l, Flint | 1 | 0 | 0... — ... |
| 12000 | Morfa Du, z, g, s, Anglesea* | 1 | 0 | 0... — ... |
| 6144 | Mount Carbis, t, c, Redruth | 1 | 19 | 0... 2½... 2 2½ |
| 12000 | New Caradon, c, St. Cleer | 0 | 8 | 3... 2/6 .. 1/ 2/6 |
| 2400 | New Cook's Kitchen, t, Illogan | 10 | 13 | 6... ½ .. ¼ ½ |
| 8000 | New Dolcoath, t, c, Camborne* | 3 | 0 | 0... — ... |
| 10000 | New Holmbush,* t, c, Callington | 4 | 0 | 0... — ... |
| 6000 | New Kitty, t, St. Agnes | 1 | 13 | 0... ⅝... ⅛ ⅝ |
| 25000 | New Langford, s, c, Callington | 0 | 5 | 0.. 2s. ... 1s. 2s. |
| 15000 | New Redmoor,* var, Callington | 1 | 0 | 0... — ... |
| 17500 | New Terras,* t, St. Austell | 2 | 0 | 0... 2⅛... 2 2⅛ |
| 3500 | New Tincroft,* t, Lelant | 6 | 0 | 0... — ... |
| 12000 | New Trumpet,* t, Wendron | 1 | 0 | 0... 1 ... ¾ 1 |
| 30000 | New Van Cons. & Glyn,*, | 7 | 0 | 0... — ... |
| 12000 | New West Caradon, c, Liskeard | 0 | 9 | 3... 1/-... 6d. 1/ |
| 3000 | New Wheal Peevor, t, Redruth | 0 | 10 | 0... — ... |
| 12000 | North Blue Hills, t, St. Agnes | 0 | 2 | 6... 2s .. 1s. 2s. |
| 5328 | North Busy, t, c, Scorrier † | 2 | 6 | 8... 2s... 1s. 2s. |
| 10000 | N. D'Eresby Mount.,* l, bl, Carnarv. | 1 | 0 | 0... — ... |
| 25000 | North Goginar,* l, Cardiganshire | 1 | 0 | 0... — ... |
| 6400 | North Green Hurth,* | 1 | 0 | 0... 1 ... ½ 1 |

## NON-DIVIDEND MINES—*continued.*

| Shares. | | Paid. | Last wk. | Clos. pr. |
|---|---|---|---|---|
| 6000 | North Grogwinion,* s-l, Cardigshr. | 1 0 | 0... | ⅛... ⅛ |
| 2000 | North Levant, t, c, St. Just | 15 | 3 | 6 .. — ... |
| 50000 | North Molton,* c, ma, s, Devon | 1 | 0 | 0... — ... |
| 65000 | North Treskerby,* c, St. Agnes | 1 | 0 | 0... — ... |
| 40000 | Okel Tor,* t, c, a, Calstock | 1 | 0 | 0... — ... |
| 30000 | Par, *t, St. Austell | 1 | 0 | 0... 1⅛... 1 1⅜ |
| 45000 | Parys Corporation,* c, Anglesea | 1 | 0 | 0.. 1s.. 6d. 1s. |
| 6000 | Pedn-an-drea, t, Redruth | 4 | 16 | 0... 21/-... 1 1⅛ |
| 20000 | Penegarreg, l, Carmarthenshire | 1 | 0 | 0... — ... |
| 10000 | Polberro, t, St. Agnes | 0 | 4 | 0... 2½... 1⅞ 2⅛ |
| 12000 | Polcrebo, t, Crowan | 0 | 15 | 9... 2 .. 1¾ 2 |
| 10000 | Port Nigel Syn,* s-l, Carnar.(4000 is.) | 0 | 15 | 0... — ... |
| 18000 | Pr. Patrick,* s-l, (als. 12000 pf. 10 p.c) | 1 | 0 | 0... — ... |
| 12000 | Prince of Wales, s, c, t, Calstock | 1 | 7 | 0... 9s.. 6/ 8/ |
| 12000 | Prince Royal | 0 | 2 | 6... 6/-... 4/ 6/ |
| 36000 | Russell United,* c, Tavistock | 0 | 9 | 6... ½... ⅜ ⅝ |
| 30000 | Silver Hill,* Callington | 1 | 0 | 0... 7/16... 5/16 7/16 |
| 50000 | Sinclair,* l, bl, Whitford | 1 | 0 | 0... ½... ¼ ⅝ |
| 40000 | Sortridge,* c, Horrabridge | 1 | 0 | 0... — ... |
| 50000 | South Caradon,* c, St. Cleer† | 1 | 0 | 0... ¼... ⅛ ¼ |
| 6000 | South Carbis, t, c, Redruth | 0 | 16 | 0... 1⅛... 1¼ 1⅜ |
| 6000 | South Kitty, t, St. Agnes | 0 | 10 | 0... ½... ⅜ ½ |
| 6000 | South Penstruthal, t, c, Gwennap | 4 | 2 | 6... ½... ⅜ ½ |
| 30000 | So. Phœnix & Caradon,*t, c, Linkinhn. | 1 | 0 | 0... ¾... ½ ¾ |
| 6000 | South Tolcarne, t, c, Camborne | 5 | 11 | 6... ½... ¼ ½ |
| 2043 | South Wheal Crofty, c, Illogan | 9 | 0 | 6... 6¾... 6¾ 7¼ |
| 4500 | South Wheal Frances, t, Illogan† | 11 | 4 | 4... 9½... 8¼ 8¾ |
| 30000 | Standard,* l, bl., Llanrwst | 1 | 0 | 0... 1¼... 1¼ 1¾ |
| 40000 | Tamar, s-l, Bearalston* | 1 | 0 | 0... — ... |
| 6000 | Tindene | 3 | 3 | 0... 2½... 2¼ 2⅝ |
| 6000 | Tolgullow United, St. Day | | | ... 2½... 1¾ 2¼ |
| 12000 | Trebartha Lemarne, t, Northill | 0 | 11 | 6... — ... |
| 50000 | Tregontrees and Old Polgooth Con.. | 1 | 0 | 0... ½... ⅜ ½ |
| 8000 | Trevaunance, t, St. Agnes | 0 | 15 | 0... 2½... 2 2¼ |
| 1000 | Vaughan,* l, Cardiganshire | 10 | 0 | 0... — ... |
| 30000 | Van,* l, Llanidloes | 0 | 10 | 0... 1½... 1⅜ 1⅝ |
| 80000 | Weardale,* l, Northumber. (4l. share) | 1 | 5 | 0... 1⅜ ..1¼ 1⅜ |
| 12000 | West Caradon, c, St. Cleer | 0 | 13 | 6... 3/6 .. 2/5 3/6 |
| 30000 | West Cornwall,* t, Cornwall | 1 | 0 | 0... 1⅛... 1 1⅛ |
| 10240 | West Devon Consols, c, Calstock | 1 | 2 | 0... ¼... ⅛ ¼ |
| 10000 | West Godolphin, t, c, Breage | 1 | 5 | 6... 1⅜... 1⅛ 1⅜ |
| 12000 | West Gonamena, c, St. Cleer | 0 | 1 | 0... — ... |
| 3000 | West Mary Ann, l, Menheniot | 1 | 18 | 0... ¼... ⅛ ¼ |
| 12000 | West Phœnix, t, Linkinhorne | 1 | 7 | 6... ¼... ⅛ ¼ |
| 6000 | West Polbreen, t, c, St. Agnes | 0 | 12 | 0... ¾... ½ ¾ |
| 6144 | West Wheal Frances, t, Illogan† | 14 | 10 | 1... 8½... 8 8½ |
| 3000 | West Wheal Peevor, t, Redruth | 5 | 0 | 0... ½... ⅜ ½ |
| 2400 | West Wheal Seton, c, Camborne†§ | 22 | 0 | 0... 5 ... 4½ 5 |
| 6144 | Wheal Basset, c, Illogan† | 9 | 7 | 6... 6½... 6 6½ |
| 4000 | Wheal Benny, t, c, Latchley | 5 | 0 | 0... 7 ... 7 7 |
| 3000 | Wheal Boys, t, Redruth | 1 | 3 | 6... — ... |
| 50000 | Wheal Castle,* c, t, St. Just | 1 | 0 | 0... 1 ... ¾ 1 |
| 12000 | Wheal Coates, t, St. Agnes | 0 | 12 | 0... 3/16... ⅛ 3/16 |
| 2585 | W. Comf., & No. Tres., t, c, Gwennap | 2 | 2 | 0... ¼... ⅛ ¼ |
| 50000 | Wheal Elizabeth,* t, Cornwall | 1 | 0 | 0... — ... |
| 12000 | Wheal Jewell, c, St. Hilary | 1 | 0 | 6... ¼... ⅛ ⅜ |
| 12000 | Wheal Lusky, t, Callington | 0 | 3 | 9... 3/16... ¼ 3/16 |
| 12000 | Wheal Metal and Flow, t, Breage | 0 | 3 | 6... 1 ... ¾ 1 |
| 2000 | Wheal Owles, t, St. Just† | 8 | 3 | 0... — ... |
| 30000 | Wh. Silver & Lanteglos,*s-l, Camelfd. | 1 | 0 | 0... ½... ⅜ ⅝ |
| 6000 | Wheal Sisters, t, Lelant | 4 | 17 | 6... — ... |
| 4096 | Wheal Uny, t, c, Redruth | 7 | 7 | 0... ½... ¼ ½ |
| 21386 | Wye Valley, l, Montgomery.* | 1 | 0 | 0... — ... |
| 60000 | Yeoland Consols,* t, Devonshire | 1 | 0 | 0... ¼...par to ¼ |
| 65000 | Yorkshire Lead Mines, l... | 1 | 0 | 0... 12/6... 10/ 12/6 |
| 4000 | Ystwith,* l, Cardigan | 1 | 0 | 0... — ... |

*bl*, blende; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate.
*s-l*, silver-lead; *t*, tin; *z*, zinc; *i*, iron; *a*, arsenic; *d*, diamond.
Limited Liability Companies; † quoted on the Stock Exchange.
‡ have paid dividends.

## NON-DIVIDEND FOREIGN MINES.

| Shares. | | Paid. | Clos. | yr. |
|---|---|---|---|---|
| 150000 | Akankoo,* g, Gold Cat. (100000 iss.) | 1 0 | 0... | 1/16 3/16 |
| 64889 | Anglo-African,*d, Kimberley,† | 10 0 | 0... | ¾ 1⅛ |
| 120000 | Asia Minor,*s-l, Lidjessy, Sivas | 0 17 | 6... | 1/16 ⅛ |
| 400000 | Balkis Consolidated, g, Transvaal | 0 5 | 0... | |
| 28000 | Belt,* c, Lake Sup., (22000 £4 paid) | 5 0 | 0... | |
| 200000 | British Australian,*g, N. So. Wales | 1 0 | 0... | |
| 10000 | Buena Ventura,*l, Spain (fy.pd)... | 2 0 | 0... | |
| 180000 | Callao Bis,*g, Venezuela | 1 0 | 0... | 4/6 5/6 |
| 82500 | Canadian, c, sul,* Canada† | 2 0 | 0... | 1/16 3/16 |
| 650000 | Chile,* c, Venezuela (New) | 1 0 | 0... | 6/ 7/ |
| 125000 | Chontales, g, s, Nicar.*† (108749 iss) | 1 0 | 0... | 3/16 |
| 75000 | Colombian Hydraulic, g, Colombia | 1 0 | 0... | 9/ 11/ |
| 200000 | Devala Moyar,* g, Wynaad† | 1 0 | 0... | 1/16 3/16 |
| 75000 | Devala Provident,* g, Wynaad† | 0 10 | 0... | |
| 25000 | Don Pedro North del Rey* | 1 0 | 0.. | 2s. 3s. |
| 214000 | Eberhardt, s, Nevada*† | 1 0 | 0... | 0 ⅛ |
| 65000 | Eureka,* s, Nevada | 1 0 | 0... | |
| 40000 | Georgia,* g, United States | 1 0 | 0... | |
| 50000 | Gold Coast,* c, Wassau | 1 0 | 0... | |
| 40000 | Gold Hill,* g, North Carolina | 1 0 | 0... | |
| 150000 | Indian Consolidated,*g | 1 0 | 0... | 3/16 ⅜ |
| 250000 | Ind. Glenrock,* g, Wynaad† | 1 0 | 0... | 3/ 4/ |
| 100000 | Iron Gate*cl. chr. Hungary | 1 0 | 0... | |
| 100000 | I.X.L., g, s, California* | 1 0 | 0... | 1/16 3/16 |
| 50000 | Javali, g, Nicaragua* | 2 0 | 0... | 2/6 3/ |
| 100000 | Kohinoor,* s, Colorado | 1 0 | 0... | 5/ 6/ |
| 620000 | Lisbon-Berlyn,* g, South Africa | 1 0 | 0... | 8d. 1/ |
| 65000 | London and California, g*†‡ | 2 0 | 0... | |
| 13500 | Mysore,* g, India† | 1 0 | 0... | 1⅞ 2⅛ |
| 75000 | New Callao,* g, Venezuela | 1 0 | 0... | 2/ 3/ |
| 378500 | New Emma,* s, Utah | 10 0 | 0... | 3/6 4/6 |
| 300000 | New Potosi,* g, Venezuela† | 1 0 | 0... | 3/16 3/16 |
| 180000 | North Mexican, s, Mexico | 1 0 | 0... | |
| 3000 | Do. debentures do. | 20 0 | 0... | |
| 2000 | Do. Preference do. | 20 0 | 0... | |
| 100000 | Nundydroog,* g, Mysore | 1 0 | 0— | 8/ 10/ |
| 5000 | Olathe,* s-l, Leadville, Colorado | 1 0 | 0... | |
| 125000 | Ooregum,* g, Mysore | 1 0 | 0... | 2/ 5/ |
| 125000 | Do. Preference 10 p. c. | 0 18 | 0... | |
| 12000 | Oregon g, U.S. (4000 prf. sh.) | 0 2 | 6... | |
| 15000 | Organos,* g, Colombia | 1 0 | 0... | 7/ 9/ |
| 80000 | Orita,* g, Colombia | 1 0 | 0... | 1 1¼ |
| 75000 | Oscar,* g, Norway (£1) | 0 17 | 6... | 3/6 4/6 |
| 80000 | Ouro Preto*g, Brazil | 5 0 | 0... | |
| 80000 | Pestarena United, g, Italy*† | 3 0 | 0... | 1/16 ⅛ |
| 96000 | Pierrefitte* (20000 pref.) | 1 0 | 0... | |
| 100000 | Placerville, g, g, California | 1 0 | 0... | 1¾ 2¼ |
| 46000 | Ravenscliff g, N. Zind; c, S. Aust. | 1 0 | 0... | |
| 80000 | Rhodes Reef,* g, Wynaad† | 1 0 | 0... | 1/16 3/16 |
| 25360 | Ruby and Dunderberg, g, Nev.*† | 10 0 | 0... | 4/ 6/ |
| 250000 | Sentein,* s-l, bl, Ariège, France | 1 0 | 0... | |
| 100000 | Silver Chord,* s, Colorado | 1 0 | 0... | ¾ 1 |
| 50000 | Silver Peak,* s, Colorado | 1 0 | 0... | ⅛ ⅜ |
| 107363 | So. Austral. Cop. Mines (Corp. of) | 1 0 | 0... | 1/6 2/6 |
| 10000 | South-East Wynaad, g, India† | 1 0 | 0... | |
| 100000 | Spitzkop,* g, Transvaal | 1 0 | 0... | 9/16 11/16 |
| 100000 | Tocopilla,* c, Bolivia | 0 1 | 0.. | ⅛ |
| 200000 | Transvaal,* g South Africa | 1 0 | 0.. | 3s 5s. |
| 200000 | Victoria,* g, Venezuela | 1 0 | 0.. | 2/6 3/6 |
| 60000 | Violeta,* g, Spain | 1 0 | 0... | 1 1¼ |
| 80000 | Wentworth,* g, Wynaad | 0 16 | 0... | ⅛ ¼ |
| 75000 | West Callao,* g, Venezuela | 1 0 | 0... | 3/6 4/6 |
| 100000 | West Frntno & Boliv.,* g, Colombia | 1 0 | 0... | |
| 83000 | Wynaad Perseverance,*† g | 1 0 | 0... | |
| 75000 | Yorke Peninsula, c, So. Australia† | 1 | 0... | ⅛ |

## MISCELLANEOUS.

| Shares. | Company. | Paid. | | Price. | |
|---|---|---|---|---|---|
| 10 | Anglo-American Brush | 8 | 0 ... | 1¾ | 2¼ |
| 10 | Ditto do. | 10 | 0 ... | 3½ | 4 |
| 50 | Lon. & Glas. Engin. & Iron Ship | 25 | 0 ... | 15 | 18 |
| 10 | Noble's Explosives [L] | 10 | 0 ... | 15 | 16 |
| 5 | Swan United Electric | 3 | 0 ... | ⅛ | ¼ |
| 12 | Tel. Con. & Maintenance [L] | 12 | 0 ... | 25½ | 26½ |
| 10 | United Asbestos | 10 | 0 ... | | |
| 10 | Young' Paraffin Light & M O. | 8 | 0 .. | 11 | 12 |

## HOME RAILWAYS.

### ORDINARY SHARES AND STOCKS.

| Present amount. | Fully pd. Stk. or sh. | | Closing quotation. Last week. | Last night. |
|---|---|---|---|---|
| 10,856,970 | ...Stock | ...Caledonian | 97¼... 96½ | 97 |
| 14,991.. | £20 | ...Cornwall | 5½... 4¼ | 5½ |
| 375,000 | ...Stock | ...Cornwall Mineral | 10¼... 8 | 10 |
| 2,642,000 | ,, | ...Furness Consolidated | 105 ...103 | 105 |
| 4,927,900 | ,, | ...Glasgow & So.-Western | 93½... 90 | 92 |
| 12,354,547 | ,, | ...Great Eastern |

## FOREIGN MINING AND METALLURGY.

In the French Iron Trade transactions have been carried through with increased difficulty, and prices would appear to be lower than ever. A quotation of 5*l.* 8s. per ton has been maintained for merchants' iron with considerable difficulty. In the East of France metallurgical industry appears to be passing through a period of change and crisis. The Eastern of France Railway Company has let a contract for 12,000 tons of rails at 5*l.* 12s. per ton to the Jœuf Ironworks. The same company has ordered 250 cast steel tyres for locomotives and tenders from Messrs. Vickers and Sons at 23*l.* 6s. 10d. per ton. The German iron trade has been dull, and prices have been drooping rather than otherwise. There had been some hopes of an improvement in quotations in consequence of the formation of syndicates for securing a reduction of production; but these hopes are growing weaker and weaker every day, both in Silesia and Westphalia. A relative firmness has, however, been imparted to the Silesian market in consequence of 20,000 tons of pig having been taken by certain Polish works, while the rolling-mills of the district have given out some rather important orders of late, and show a disposition to enter into more considerable contracts. One establishment in Upper Silesia has ordered, it is understood, 25,000 tons of raw materials to be delivered in 1886. In Westphalia the market for pig presents a quieter tone, and no important orders appear to have been obtained for the last quarter of the year, although lower rates are now current.

There has been scarcely any change in the general tone of the Belgian Iron Trade. Business has been very quiet, and price have shown some weakness. Employment does not absolutely make default at the Belgian ironworks, but work is obtained upon terms and conditions which yield scarcely any profit. Contracts for railway plant are about to be let at Brussels, but the orders which will thus be given out are of comparatively little importance. Tenders have been received at Brussels for the purchase of 3600 tons of old Vignoles rails; the highest offer submitted was that of Herr Kann, of Hanover—2*l.* 5s. 1d. per ton. M. Delloye-Matthieu, of Huy, took 200 tons of old fish-plates at 1*l.* 17s. 2d. per ton. There was a fair competition for this old material. The Charleroi Iron Manufacturing Company will distribute a dividend of 1*l.* 8s. per share for the past financial year. The Vezin-Aulnoye Company will give a dividend of 10s. per share, or half the preceding dividend. At the close of June, 1885, the John Cockerill Company had orders in hand to the aggregate amount of 314,400*l.* The corresponding amount of orders on hand at the close of September, 1884, was 433,200*l.*, so that in the nine months ending June 30, 1885, the company's business experienced a certain contraction. At the close of September, 1885, however, the aggregate orders on hand had rallied to nearly 400,000*l.*; and having regard to the general decline in the value of commodities the amount of work now on hand may be said to be as large as the corresponding amount of work 12 months since.

The tone of the Belgian Coal Trade has not presented much change, prices having remained at about their previous level. Coking coal has been rather feebly maintained. The German coal trade has shown no symptoms of an improvement at present. The deliveries of German coal to Italy in August *via* Chiasso, Pino, and Locarno amounted to 6610 tons, as compared with 6730 tons in July. The imports of coal into the Zollverein in July amounted to 210,604 tons, as compared with 248,433 tons in July, 1884, showing a falling off of 37,829 tons. The aggregate imports for the first seven months of this year were 1,196,285 tons, as compared with 1,179,484 tons in the corresponding period of 1884, showing an increase of 16,801 tons this year. The exports of coal from Germany in July were 688,821 tons, and for the first seven months of this year 4,928,911 tons. The exports for July last year were 687,358 tons; and for the first seven months of 1884, 4,769,281 tons, showing increases of 1464 tons and 159,630 tons respectively this year. It is expected that the imports for the whole of this year will show a decrease as compared with those for the whole of 1884. On the other hand, the exports are increasing, and seem likely to make still further progress. The shares of the John Cockerill Company have been changing hands of late at 46*l.* each. In September, 1884, the corresponding quotation was 43*l.* 4s. The dividend distributed for the financial year ending June 30, 1885, was 2*l.* 16s. per share, a large amount of capital being at the same time written off for depreciation of premises and plant.

## THE IRON TRADE.

There was a large attendance, on Thursday, at the quarterly meeting of the iron trade, at Birmingham, including a fair number of merchants from London, Liverpool, and Bristol, but business in most departments was exceedingly flat, and the meeting broke up sooner than usual. Official prices were unchanged, the smelters adhering to their former quotation of 3*l.* for hot-blast native all-mine, whilst the list makers of finished iron quoted 7*l.* 10s. as the standard for marked bars with the usual 12s. 6d. extra for Lord Dudley's brand. Although the price quoted has long been nominal for some of the list houses, it is strictly adhered to in at least two cases—by William Barrows and Sons, and the New British Iron Company. As regards the commoner qualities, both of crude and finished iron, prices are fairly steady at late rates—5*l.* 5s. as the minimum for common unmarked bars, 6*l.* 10s. for common sheets (singles) and 6*l.* for angles. The pig market is very quiet for the moment, but some large sales were effected before the close of September, and smelters, more particularly of the medium qualities of Staffordshire, Derbyshire, and Northamptonshire, are well sold forward, and their prices are consequently firm. The principal business done at the quarterly meeting was in tin-plates and sheets, plain and galvanised which were all very firm. The tin-plates makers reported a good enquiry for shipment at full rates, chiefly on account of the United States and Canada. At the quarterly meeting of the galvanised iron trade full employment was reported by the makers present, who are obtaining in several instances more than the 5s. advance lately declared. Makers of black sheets are in most cases booked forward to the end of the year, and decline further orders, except at an advance of 2s. 6d. upon former prices. Outside the sheet department and the tin-plate branch there is very little business stirring in the iron trade at present, and the mills are not more than two-thirds employed. The coal trade shares the general quietude, though domestic qualities are in growing demand with the advance of winter.

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In the preliminary prospectus of the Manchester Ship Canal Company it is proposed to raise 8,000,000*l.* of the capital by the issue of 800,000 shares of 10*l.* each—10s. per share being payable on application and 10s. on allotment, and the remainder at such periods as may be found necessary. It is thought that the revenue of the Bridgewater Canal undertaking will enable the directors to pay interest at the rate of 3*l.* per cent. per annum upon all capital which it will be necessary to call up during the first 12 months. The following are by the Act appointed the first directors of the company:—Mr. Daniel Adamson, C.E., J.P.; Councillor Henry Boddington, jun.; Mr. Jacob Bright, M.P.; Mr. William Fletcher; Mr. Hilton Greaves, J.P.; Alderman Richard Husband, J.P.; Mr. Charles Paton Henderson, jun, J.P.; Mr. Richard James; Mr. Joseph Leigh, J.P., Mr. James E. Platt; Mr. S. Radcliffe Platt, J.P.; and Mr. John Rylands, J.P. The following have consented to join the board at the first ordinary meeting of shareholders:—Mr. William Henry Houldsworth, M.P.; Sir Joseph Cocksey Lee, J.P.; Mr. Alderman W. H. Bailey; and Mr. John Rogerson, A.C.E.

## THE FLOATING OF THE NEW SOUTH WALES LOAN.

As will be seen in another portion of our issue, the floating of this loan has been accomplished at an average of 13s. 5d. over the minimum of 91*l.* for each 100*l.* stock Three and a Half per Cents. Although over 12,000,000*l.* was applied for, it is known that the floating of the loan was only accomplished with more difficulty than attended the floating of other loans, and it cannot, therefore, be accounted a great success. In June last the New South Wales Government desired to place this loan upon the market, before the subscribers of the previous 5,000,000*l.* had really time to place out the stock to any advantage. The Agent-General, Sir Saul Samuel, was advised by his financial advisers here not to place the loan on the market then. This appears to have given umbrage to the Ministry at Sydney, who imagined they knew the feeling of the money market in England better than those on the spot; and they put out a feeler in the shape of a telegram on July 10th, announcing that the New South Wales Government were about to issue a new loan of 5½ millions, bearing interest at 3½ per cent. The publicity given by this ill-advised telegram called forth a remonstrance from the Stock to Exchange holders of the previous issue, who naturally wanted to be off with the old love before they took up with the new. The proposal fell flat, and the loan was not then issued. The irate ministers appear not to have relished the rebuff, and we find by the *Australasian* (August 15) that it was rumoured that at a recent sitting of the Cabinet in Sydney a minute was passed censuring the Agent-General for recommending the withdrawal of the 5½ million loan. The minute is said to be strongly worded, conveying the opinion that the Agent-General allowed himself to be influenced by money-brokers. A few days later we find it stated—"It is understood that Sir Saul Samuel, the Agent-General, in reply to the telegram containing the substance of a minute of the Cabinet censuring him for his conduct in matters relating to New South Wales loan, has asked the Government to withhold any decision on the subject until they have received his explanation." If anyone blundered over this business it certainly was not Sir Saul Samuel; his advice to the Sydney Cabinet was sound at the time. It may not be an unfortunate circumstance that the full-blown dignity of certain members of the Sydney Cabinet should receive a check to their arrogance, and be taught a lesson that borrowers must not be dictators also. It is all very well for the temporary occupants of a seat in the Cabinet at Sydney to keep on pledging the credit of the magnificent country that fate or destiny has called on them to rule; but it is time to begin to pause for a little reflection as to the wisdom of borrowing 5,000,000*l.* a year for public works. That the borrowing powers of the Australasian Colonies are great, we all admit, and the resources are practically unlimited, but does it not seem somewhat of an anomaly that the very gold-producing colonies which have during the past 30 years poured into England nearly 300,000,000*l.* sterling of gold should be always in a state of impecuniosity to carry out its public works. Australia, the land of gold, with thousands of rich quartz reefs, and hundreds of miles of alluvial leads rich in gold, borrowing money from England is very like sending coals to Newcastle. In that happy land of the sunny South they have, as Mr. Thos. Cornish states in his work on "Our Gold Supply," &c., "Nature's National Bank of Issue," in the shape of the richest gold mines of the world, from whence an unlimited quantity of gold can be drawn if capital and labour be but properly directed to the industry. Have the Governments of New South Wales and other colonies given sufficient attention to the development of gold mining, from which industry only can the supply of gold be maintained to provide the essential medium of exchange, so necessary to all countries? Surely there must be something radically wrong in the management of States or colonies that are themselves the absolute producers of gold and other forms of wealth that necessitates their continually coming to this country to borrow a loan of a few paltry millions after they have been sending us nearly 10,000,000 a year for the past 30 years; and, according to their own showing, possessing within themselves the means of doubling or trebling their present gold supply if they would but give a little more practical attention to the gold mining industry. Although we find millions of money devoted to the construction of railways for the improvement of the value of the squatters' stations and farm lands, we hear but little of any portion of these loans devoted to the mining interest, the construction of water-works for supplying the miners with water, or for the erection of national works that would tend to materially advance the prosperity of that industry. Were this done the colonies could obtain an unlimited supply of new gold, not only to pay off their own liabilities, but which they could lend to other nations.

## THE MINING MARKET.

Mr. John B. Reynolds writes:—The markets for mining shares have during the week exhibited some considerable strength, and although the fluctuations have not been important certain shares has been in prominent demand. West Kittys have led the way, and find buyers at 8*l.* In consequence of this circumstance New Kittys have been in favour, and there are ready buyers at 13s. Why these shares have been so little mentioned lately it is difficult to explain, excepting from the fact that every now and then it is the rule for some mines to fall into the background by common consent, in order that their real merits may be tested. This mine is now regarded by some well-informed persons as a leading speculation of high order. South Crofty also may be mentioned in the same category of neglected speculative securities which have come to the front, and here, as in the case of New Kitty, we have a mine adjoining a very rich neighbour. The improved prosperity of Carn Brea must be noted, and will give satisfaction to everybody, whether directly interested or not. The rich discoveries at Wheal Grenville are further illustrations of what often follows patient and judicious development of first-class mines. West Polbreen is being noticed on account of the vigorous manner in which operations there are being just now conducted. "Coming events cast their shadows before," and here we may not improbably see a rise of 300 or 400 per cent. in the market value of the mine. West Frances, with all the advantages of a first-class district, and a most popular manager, more than holds its own, and everybody is ready with a good word for a property which has so exercised the patience of the shareholders. Now it appears that the mine is what many well-informed persons always thought—a very valuable affair. Wheal Agars and East Pools have remained very firm, thus showing most clearly the decided impressions in well-informed circles of the probable future of the Tin Market. The same may be said of course of Dolcoath. Trevaunance shares have again been in demand, as well as Polberro. These two properties are now looked upon as being splendid possessions. We shall probably before long have facts known to all which are now confidently predicted by every reliable authority as to these two favourite mines. Taking a general retrospect of the situation as it has appeared during the past six months those who anticipate a satisfactory future for mining interests have arrived at the only conclusion to which common sense and close observation can guide anybody. The buyers of mining shares just now are men who are not driven hither and thither by conflicting statements, but individuals who know what they are about, and who act upon information which is as sound as it is trustworthy.

## VICTORIA GOLD FIELDS.

The yield for the three months ending 30th June was only 185,037 ozs. 15 dwts. 10 grs., as against 192,438 ozs. 11 dwts. 15 grs. for the March quarter, being a decrease of 7300 ozs. 16 dwts. 5 grs. The falling off in the yield has been principally in some of the alluvial mines, and the divisions in which they occurred are Creswick, Maryborough, Majorca, Avoca, and Indigo. From quartz mining, on the other hand, there was an increased yield of gold in several divisions, and notably in the central division of the Ballarat district. The total value of the gold raised for the quarter at 4*l.* per ounce is 740,151*l.* In the Ballarat district the Band of Hope and Albion Consols are obtaining excellent yields from their deepest levels. This company crushed 5021 tons, yielding 4393 ozs. 13 dwts. 12 grs. of gold, an average of 17½ dwts. per ton. As the Registrar observes, "this adds another link to the chain of evidence, against the theoretical idea formerly entertained that quartz is not gold bearing at deep levels." The district still continues in a prosperous condition, and the recent discoveries in the deep ground have already had a marked effect in causing increased activity. This also has been noticeable at Sandhurst, on the Garden Gully line, where the discovery of a payable reef in the Victory and Pandora Mine at 1860 ft. has already caused several companies on the south end of the line to resume operations which had previously been suspended for lack of encouragement in the shallower levels. With the excellent prospects obtained by several of the deep mines now at work it should be sufficiently encouraging to induce more companies to increase their shafts in depth as rapidly as possible, and not neglect the cross-cutting and development at the same time.

The New North Clunes Company has discovered a new make of stone, which will have an important effect not only on their own mine but others in the district. They have driven nearly 300 ft. on the course of the new lode, and it still presents a payable appearance. The alluvial mines at Kingston continues to yield well, Madame Berry Mine producing 10,054 ozs. 9 dwts., and Lone Hand 6664 ozs. 7 dwts. of gold for the quarter, while others make up a total yield for that district of 26,376 ozs. 9 dwts. In the Gordon sub-division the Egerton and Black Horse Mines have made important discoveries at deep levels, which are likely to give a new lease of vitality to the district. The determination by the Egerton Company of sinking a new shaft 2000 ft. is a wise one, and will, we are confident, be attended with beneficial results. In the Sandhurst division prosperity continues, and the recent discoveries in the deep ground have already had a marked effect in causing increased activity; the four deepest mines are producing good payable stone. It would be a good policy to consolidate some of the smaller companies on the main lines of reefs and carry down more deep shafts with energy. The Victory and Pandora crushed 112 tons for 110 ozs. 2 dwts. from the new reef at 1860 ft. in depth. This with the equally important discovery in Lansell's (180) Mine at 2000 ft. definitely establishes the value of deep sinking on main lodes. The quartz crushed in this division was 34,713 tons, yielding 19,963 ozs. 16 dwts. gold, averaging 11 dwts. 12·05 grs. per ton. The Eagle Hawk division the yield of gold, irrespective of that obtained from pyrites, was 27,156 ozs. 19 dwts. 10·7 grs. per ton, out of which dividends were paid, amounting to 42,197*l.* 10s., the United Devonshire Mine contributing over one-fifth of the amount. In the Majorca sub-division the New Kong Mong are meeting with fair success. Several other divisions also report favourably of future prospects. In the St. Arnand division the New Bendigo Company crushed 1316 tons of quartz from between the 400 and 500 ft. levels, which gave the excellent yield of 1 oz. 1 dwt. 15·7 grs. per ton, enabling the company to pay a dividend of 3000*l.* As the main shaft is 600 ft., and a winze sinking from the 500 to the 600 ft. levels on good stone this company is likely to be heard of prominently in the Dividend-list. In the Stringer's Creek division the Long Tunnel Mine continues to yield well and to pay good dividends, the amount for the quarter being 12,000*l.* Both this company and the Long Tunnel Extended are sinking their shafts below the 800 ft. levels. In a special report by Mr. Reginald A. F. Murry, geological surveyor, he says: "The main shoot has been followed down on its dip from its surface outcrop at the southern end to a vertical depth from the surface of 800 ft., where it is now being worked by the Long Tunnel and Long Tunnel Extended Companies. In general persistency, and in the maintenance of a regular auriferous character, this lode is perhaps unequalled in Australia, and there is no apparent grounds for doubt as to its continuance to more than double the depth at which it is now being worked. Besides the main lode, other rich shoots and splices have been proved to exist in connection with it." Altogether the reports of the Victorian gold fields bear a decidedly favourable character, and with intelligent direction of capital and labour there is little to fear of a diminution of our supply of gold from that thriving colony.

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Experiments with High Explosives.—The series of gunnery experiments which the sea ranges at Shoeburyness hardly lend themselves to, and which are, consequently, conducted on the extensive land ranges at Lydd, terminated last week, having been extended over an unusually long period. The trials have been almost exclusively such as would be instructive for siege purposes, and, having regard to the fact that these are the first experiments on a large scale which have yet been conducted in England in the matter of firing high explosives from modern ordnance, the results will undoubtedly prove of exceptional interest and value. Probably the principal of the trials undertaken have been those by which the effects of the detonation of blasting gelatine, or dynamite, have been tried against stockades of oak and railway metal. The experiments with this material have hitherto been much less exhaustive than those with gun-cotton, the service explosive; but the gelatine being a more violent explosive would be in an increased degree valuable, providing it were found equally safe. A great amount of care was required in the transport of the substance, which the railway companies refused to carry. It had, therefore, to be brought direct from Nobel's establishment at Glasgow in the manufacturer's steamship, and landed on Dungeness beach, from which it was conveyed to the camp in ambulance wagons. Its detonation was effected by means of electricity. The trials would, however, tend to show that its use is not likely to supersede that of gun-cotton, owing to its being found of a less reliable nature; and it is quite certain that blasting gelatine, in its present condition of manufacture, is not suitable for firing from rifled ordnance. Another matter of interest has been the firing in shells of gun-cotton at targets supplied by the Admiralty so shaped as to represent the unarmoured portions of modern ships of war, in order to test the effects of the bursting of gun-cotton upon similar structures. The shells were fired from an 8 in. breechloading 12-ton gun, and it is understood that some important results were obtained. A third high explosive, the invention of a German officer, has been subjected to some severe tests. It is known as "metadimitrobenzole," and was supplied from Grimson's well-known works. The material, which is fired in shell, consists of two ingredients, which, separated, are non-explosive; but when combined, as on the firing of a gun, form one of the most powerful explosives known. The experiments have been conducted by Capt. Acland, R.A. They have been witnessed, among others, by the Field-Marshal Commanding-in-Chief His Royal Highness the Duke of Cambridge; Mr. Guy Dawnay, Surveyor-General of Ordnance; Colonel Majendie, Her Majesty's Inspector of Explosives; Sir Charles Arbuthnot, Sir Frederick Bramwell, Sir Frederick Abel, and many other of the highest authorities upon gunnery.

# Law Intelligence.

HIGH COURTS OF JUSTICE—Tuesday.
CHANCERY DIVISION (VACATION COURT).
Before Mr. Justice Mathew.

IN RE THE LISBON BERLYN, &c., GOLD FIELDS COMPANY.

In this case Mr. Marten, Q.C. (with him Mr. Bramwell Davis), made an application to the Court to compel the petitioner (Mr. F. R. Pike) to attend an examination that he might be further cross-examined, and also that he should be ordered to pay the costs. At the examination the petitioner was cross-examined upon his evidence, and was asked the following question:—"Have you not arranged with anyone as to the costs of this petition?" (the suggestion being that the petition was a bogus one) and he refused to answer it. Thereupon the examiner gave a certificate of the fact, and he (the learned counsel) now asked for an order.

Mr. Justice Mathew: Is not that a very relevant question?——Mr. Gregson (for the petitioner) submitted that it was not. It might have been relevant if the question had not been between the petitioner and the company, but between two petitioners.

Mr. Justice Mathew: Is the petitioner a creditor or a shareholder?——Mr. Gregson: He is both. The company is being wound-up voluntarily, and the question is whether the winding-up is to be subject to the supervision of the Court or a compulsory one.

Mr. Justice Mathew: What do the other side suggest is his motive?——Mr. Gregson: They suggest it is simply a vexation. It is difficult to gather what their contention is on that point.

Mr. Justice Mathew: They say that you would not have gone on unless you were indemnified, while you say that you are not. The question is put to the petitioner, and he will not answer.

Mr. Gregson contended that the question was not material.

Mr. Justice Mathew: He refuses to give any information on the subject. The utmost I can do for you is to reserve the costs to see if it appears after he has been examined that he has nothing further to disclose, though it seems to me that he is *prima facie* in the wrong in the course he has adopted.

Mr. Gregson: I should assume from his having refused to answer the questions that there was something further to disclose. (Laughter.)

Mr. Justice Mathew: You do not think much of my concession then. I make the order reserving the costs to be dealt with on the hearing of the petition.

IN RE THE NEATH HARBOUR SMELTING AND ROLLING WORKS COMPANY (LIMITED).

Mr. Marten, Q.C., applied *ex parte* that the order pronounced by his Lordship on Thursday last dismissing the petition for the winding up of the above company (presented by Mr. W. A. Stevens) with costs, should be stayed, and the case reinstated in the paper for re argument for the following reason:—During the hearing of the case a list of persons was put in purporting to be the names of shareholders who opposed the petition, and it was said that the majority of the shareholders were desirous of going on with the venture. To that statement his Lordship gave great weight, and dwelt particularly on the fact in pronouncing judgment. The petitioner had since discovered that three of the persons whose names were on the list and represented as holding a large number of shares really were persons in the employ of a firm for addressing envelopes at a salary of 1*l.* a week, and he had the affidavit of one of them—Henry Evans—showing that he never paid any money for the shares at all, but received 5*s.* for taking them, and he never signed any papers expressing a wish that the company should not be wound up.

Mr. Justice Mathew: I must leave you to make this motion to the learned judge to whom in the ordinary course the case belongs. It took nearly the whole day to hear the petition. I will not allow the other business to be hindered, and, therefore, decline to interfere.

HIGH COURT OF JUSTICE—Wednesday, October 7.

RE THE COALSHILL COAL COMPANY.

This was a petition presented by the liquidator appointed in the voluntary winding-up of the above company under the 138th section of the Company's Act, praying for the sanction of the Court to a proposed arrangement for the sale of the assets of the company. The counsel making the application stated that the company was incorporated in the month of March, 1879, with a capital of 12,500*l.* which had been fully paid-up. The resolution to wind-up the company was passed in April, 1885, at which date it was entirely insolvent, owing 14,800*l.* to the bankers who had advanced that sum on the guarantee of the directors (with the consent of the shareholders) who took a mortgage on the property for the amount guaranteed. Besides that the company owed 1100*l.* to outside creditors and about 300*l.* for rent of the mine and royalties. The costs of the liquidation was about 200*l.* The directors had paid the 14,800*l.* due to the bankers. The liquidator had advertised the sale of the lease of the colliery in different papers, but it had not resulted in any offers being received. Under these circumstances the liquidator had entered into a provisional contract with the directors to sell to them the assets of the company, which consisted of the lease of the mine from the landlord, some rolling stock and certain cottages occupied by the miners, upon the terms that the directors paid the costs of the liquidation, the simple contract creditors in full, all liabilities to the landlord, and gave up their own claims for the 14,800*l.*

A meeting of the shareholders and creditors had been called, who adopted a resolution embodying the above arrangement unanimously. Mr. Justice Mathew gave his consent.

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At the Town Hall, Pontefract, on Monday, John Slater, underground viewer at the Prince of Wales Colliery, Pontefract, owned by the Mayor (Alderman Rhodes), was charged under the 17th special rules of the colliery with neglecting to have proper sectional air courses, and thereby endangering the lives of the workmen, gas being reported to exist in the pit. Mr. Gill, Wakefield, appeared to prosecute on behalf of Mr. F. N. Wardell, Government Inspector of Mines for Yorkshire; and Mr. Hall, of Wakefield, for the defendant. Alderman Rhodes was likewise summoned by Mr. Wardell, the Inspector, for having neglected to see that the safe working of the colliery was attended to as owner. The manager, Mr. James Eley, was summoned under the general rule for neglecting to see that the mine was properly ventilated, and the gas diluted so as to render it harmless. The cases were gone into separately.

Mr. Gerrard, Government Inspector of Mines, was called, and stated that on the 23rd July he visited the colliery to investigate a fatal accident, and his attention was called to the fact that some of the sectional air courses were only 10 ft., 11 ft., and 14½ ft. wide, instead of 18 ft., as required in all cases in the colliery, while there was an accumulation of gas in the various parts of the pit. The defendant Slater did not deny that the air courses were not wide enough, but he attributed this to the fall of portions of the sides of the workings and other accumulations.

Mr. Rhodes was called and said he took no prominent part in the management in the colliery, but gave instructions for every precaution to be taken for the safety of those employed in the pit.

The report book was produced by Mr. Gill, containing, from the 20th June for several months following, entries of gas existing in the pit in various parts; and Mr. Gill pointed out that it was the duty of the owner to personally examine this book daily, and asked whether it was not a fact the men had had to be brought out of the pit owing to gas existing?

In the case of the manager, Mr. Gerrard (the Inspector) said he found gas existing on making his examination. In many places the pit showed the blue cap, and was consequently very dangerous. He discovered a large accumulation of gas even in one place where a man named Dennis Gilligan was at work, and which showed the blue cap.

Several miners employed at the colliery were called to show that the pit was safe for working, and although there was gas existing, there was sufficient ventilation to drive it away.

There was a second charge against the Mayor under the first general rule.

The Bench retired to consider their decisions, and the Chairman, after a short absence, returned into Court, and asked the Government Inspector if it were safe to work the mine with the air courses of less width than 18 ft.?

Mr. Gerrard replied that it might be worked with safety, but it was less than the rules stated.

The Bench said they were unanimous in their opinion that the underviewer was guilty, and inflicted a fine of 2*l.*, and in the case of Mr. Eley a fine of 3*l.* was imposed. In the case against the owner, Mr. Rhodes, the Bench said they believed that he had practically left the working of the pit in the hands of the two other defendants; but they hoped he would now see to the proper ventilation of the colliery, and dismissed both cases against him.

## MANCHESTER GEOLOGICAL SOCIETY.

The annual meeting of the members of the above society was held on Tuesday, in the Literary and Philosophical Society's rooms, Manchester, and the chair was occupied by Mr. Joseph Dickinson, H.M. Chief Inspector of Mines.

Mr. Mark Stirrup, one of the hon. secretaries, read the annual report of the Council, of which the following is an abstract:—The Council were pleased at being again in a position to lay a favourable report before the members. The work of the past session had been well maintained, the character of the papers read at the meetings compared favourably with those of previous years, and the financial position of the society was also in a satisfactory condition. In addition to the usual meetings during the session, an evening meeting had been held in the Owen's College, the intention being that the members should be brought more closely into contact with the valuable geological collection formerly the property of that Society, but which, under certain conditions, had some years since been presented to the College. With the permission of the College authorities it was hoped to be able to hold further meetings in the museum, where the new buildings for housing the geological and natural history collections were well advanced, and it was a pleasant reflection that Manchester might at last look forward to no very distant date when she would have a museum worthy of the district of which she was the centre. During the ensuing session it was proposed to hold two meetings in Wigan, as in the session just concluded, and the council looked for the co-operation of the members in providing papers and taking part in the discussions thereon. During the session three deaths had occurred amongst the members, and the names of five had been removed from the books; eleven new ordinary members had been elected, and the number of members now on the lists was 16 honorary, eight life, and 202 ordinary members, making a total of 226 members. The report having been unanimously adopted the election of officers for the ensuing year was proceeded with. For the office of President Mr. H. M. Ormerod, F.G.S., was unanimously elected, and that gentleman having briefly thanked the members for the honour they had conferred upon him, took his seat as Chairman of the meeting.

The remaining officers were elected as follows:—Hon. treasurer, H. M. Ormerod, F.G.S.; hon. secs., J. S. Martin, F.G.S., and M. Stirrup, F.G.S.; hon. auditors, Alfred Pilkington and James A. Martin; Vice-Presidents, George Wild, R. T. Burnett, F.G.S., W. S. Barrett, and H. A. Woodward; Council, T. D. Grimke, G. H. Hollingworth, F.G.S., Charles Hardwick, George Peace, James Radcliffe, James Tonge, William Watts, F.G.S., J. S. Burrows, Clegg, Livesey, Henry Hall, C. G. Jackson, and C. Leader Williams.

Mr. Mark Stirrup, F.G.S., next read a translation of a paper by Mr. Charles Brongniast, of Paris "On the Fossil Insects of the Primary Group of Rocks: a Rapid Survey of the Entomological Fauna of the Palæozoic Systems," which was illustrated with photographs and drawings of insects found in the coal measures of the mines of Commentary, Allier. With regard to some of these insects Mr. Stirrup remarked that there were some now in existence which were so large, that if the forests of the coal era were not vocal with the song of birds they were certainly vocal with the buzz of gigantic insect life. In reply to a question, Mr. Stirrup further remarked that he felt certain specimens of these insects might be found in the Lancashire coal measures if they were looked for; the insects of which they had seen illustrations were found in the shales such as occurred in the roofs of their own coal mines.

Mr. Dickinson, in moving the usual vote of thanks, observed that if they were to accept the assumption that these insects were or had been amphibious a great many difficulties would be got over as to the formation of the rocks; he had never yet met with a single fossil of any animal which had not at some period of its life had a water habitat.

Mr. Burnett seconded the motion, which was agreed to unanimously, and the further discussion of the paper adjourned to a subsequent meeting.

## THE AMERICAN METAL MARKET.

Messrs. Mathews and Webb write under date September 23rd:—Honesty compels us to admit that the newspaper "boom" is restricted rather to volume than to the prices. There is no doubt, however, that the general condition of trade is much better than it was three months ago. The commercial reports for last week show fewer failures than for some time past. The Clearing Houses show an improvement of 12 per cent. over the same week last year. The surplus reserve in the New York banks is now $50,000,000, which is a contraction of $10,000,000 within a couple of months, and the balance of trade continues in our favour. The New York stock market has been very irregular, owing to the utterly demoralised condition of freight rates. It is manifestly impossible for any road to carry goods at 8c. per 100 lbs. from Chicago to New York, or at 11c. from St. Louis to New York, except at a loss. There is talk of a seven years' solid-forfeit pooling freight arrangement; but the millenium is likely to arrive before any pool holds together seven years or seven months even.

Silver.—A bankers' convention is now being held at Chicago, and the silver question will be the important topic. In India there has been almost a panic on account of the accumulation of silver there, and at London prices have been very much depressed.

Copper seems to have no friends, and the history of various large sales is now again repeating itself, and prices are slowly sagging. The cost of production limit has quite evidently not yet been reached, and until the inexorable balance of supply and demand comes nearer to a tie, we cannot hope to see a permanent advance. At New York Lake has been obtainable just a shade below 11c., and the outside brands have been sold all the way down to 10c., but deliveries have been extremely light on all qualities. At London the lowest quotation on record has been made by Chili bars slowly receding to 41*l.* 7*s.* 6d., while best selected holds its own at 47*l.*, according to our latest cablegrams, while mail advices show that no special support is being given to copper, and no special confidence is felt in its future.

Lead has ruled with the utmost steadiness at all points. The silver decline has worked disastrously against the interests of ore producers, and their only consolation is the continued firmness of lead. The sales of the week foot up over 2000 tons at $4·12½ and $4·15 at Chicago, and $4·25 at New York, mostly common and chemical and for September delivery. As any stock put into beds now by the consumers would come out in mid-winter they are running as light as possible; but the shot and pipe trades are using up lead freely. Stocks in manufacturers' hands are as low as at any time for several years, and our predicted steady high prices throughout the autumn show every prospect of being maintained. The English market is at 11*l.* 2*s.* 6d., or close to 4½c. New York, so that any further advance here would be unwise lest importations should be encouraged.

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Insurance Shares have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance British and Foreign, 36¼; Atlas, 15 to 15 16; City Marin 1 15/16 to 1 13/16; Guardian, 59½ to 60; Globe Marine, 1; London, 44 to 44½; London and Provincial Marine, 4 1/16 to 4 3/16; Marine, 27⅞ to 28; Merchants. Marine, 1; National Marine, 1¼; Ocean, 5⅜; Phœnix, 205 to 208; Rock, 7 9/16 Insurances easier, especially Phœnix.

## OBITUARY.

The Cornwall County Coroner (Mr. R. R. Rodd), on Wednesday, held an inquest at Lee Moor, in the parish of Shaugh Prior, on the body of Mr. William Langdon Martin, J.P., the proprietor of the Lee Moor Clayworks. Mr. William Martin, the son of deceased, said:—On Monday morning last, the 5th of October, about 10 o'clock, I left the house with my father to visit the works at Lee Moor. He was apparently in his usual health and spirits. We proceeded together to the bottom of the works, where Cobledick, the foreman, met us, and we went through the clay shed together. Whilst we were in one of the kilns deceased said, "I am out of sorts. I had a bad night, and do not feel very well. I did not tell them anything about it at home." With that he seemed to stagger, and fell away upon one side against a cask of clay. He slid from there towards the ground, but the foreman and I caught him. Deceased did not move, but a choking noise and puff of air proceeded from his mouth. Death occurred about a quarter before eleven.—Mr. J. Cobledick having given corroborative evidence, Mr. R. M. Griffin, surgeon, said, at the coroner's request, I have made a *post mortem* examination of the body of the deceased at Lee Moor House. I found that he died from syncope. He had a very weak and fatty heart, and also congestion of the right lung and upper part of the left lung. The disease he was suffering from would cause sudden death. The walls of his heart were very thin, about one-third of their normal thickness. Syncope was the primary cause of death, due from a very fatty heart. The jury returned a verdict of "Death from natural causes." The news of the death of Mr. William L. Martin caused great surprise to the inhabitants of St. Austell. Deceased was one of the old townsmen of the place, and was, as indeed are all the members of the family, greatly respected by his fellow-townsmen. He was the senior member of the firm of Messrs. Martin Brothers, china-clay merchants, and his long connection with the clay industry, the interest he took in all local matters, and his genial bearing will find him a high place in the estimation of the inhabitants. It was currently reported a few days ago that there was a probability of his being brought forward as the Conservative candidate for the St. Austell Division, and his popularity would have secured for him a considerable following.

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Economy in Iron Manufacture.—A Staffordshire invention for aiding in the economical conduct of ironworks, and which has been adopted at several Staffordshire works, is just now making a start among the ironmasters at Pittsburg, Pennsylvania. It is the patent hot-air chamber of Mr. Job Tibbs, for the utilising of dry oxide cinder bottoms in mill and other heating furnaces. By means of this invention the obnoxious sand bottoms may be wholly abolished from ironworks, and a superior quality of iron produced at a cost of from 5*s.* to 7*s.* 6*d.* per ton less; and in some cases the saving is, it is stated, as much as 10*s.* per ton. The chamber is in successful operation at the Great Bridge Iron and Steel Works, Tipton, where four chambers are in operation. Messrs. Firmstone's Crookhay Works, Messrs. Wilkinson's Works, Dudley Port, Messrs. Lones, Vernon, and Holden, at Smethwick, the Hyde Ironworks, Stourbridge, and Messrs. Russell's Cyclops Works, Walsall. The chamber is also in use in Scotland, and in some other districts. Port Henry ore, such as is used in the Pittsburgh district, has been proved by experiments to answer remarkably well, and chambers are now being erected at certain Pittsburgh works. The advantages of the invention in mill practice, in addition to those previously named, are numerous. By using a small quantity of ground pottery mine at the rolls, the scale from the iron supplies a good covering for puddling furnaces; best best iron can be re-heated, if necessary, upon the same bottom, and the waste is largely diminished. In forge operations one of the principal advantages is that a valuable fettling is obtained for the puddling furnace, and by using the cinder from the bottoms of the furnace as a fettling six heats can be worked in less time than by using pottery mine, purple ore, and the like.

Rating of Mining Parishes.—It is considered by very many persons that Cornish mining adventurers pay far more towards the local rates of the county than is fair. Certainly the proportion appears very large. Taking the figures of the two mining parishes of Camborne and Illogan, as shown below, it will be seen that in 1883 out of a gross assessment of 65,000*l.*, the mines and mine streams were assessed at 24,000*l.*, odd—considerably more than one-third:—

| | 1883 | | 1884. | | 1885. | |
|---|---|---|---|---|---|---|
| Parishes. | Ratable value. | Mines and Streams rated at. | Ratable value. | Mines and Streams rated at. | Ratable value. | Mines and Streams rated at |
| Camborne | £35,435 | 10,834 | 37,021 | 12,076 | 36,547 | 11,469 |
| Illogan | 30,061 | 13,533 | 27,443 | 10,470 | 26,788 | 9,942 |
| Redruth | 24,954 | 1,680 | 25,126 | 1,165 | 25,363 | 680 |

So far as as Camborne is concerned, it will be seen the rates in 1884 were in excess of 1883 by 1242*l.* This year they are about 600*l.* less. Illogan rating of mines is about 4000*l.* less than in 1883, in consequence of decreased values. Redruth mining assessments are very little more than a third of what they were in 1883—660*l.*, as against 1680*l.*, in consequence of the stoppage of so many mines.—*West Briton.*

The extensive park around Hamilton Palace, which is one of the finest and most picturesque in Scotland, will shortly cease to exist, as the Duke has resolved to sink numerous pits, in order to work the coal mines which are supposed to exist underneath.

Mr. R. Symons' mining map of Cornwall shows the position of every mine in the county, and consequently is valuable for reference by all interested in Cornish mining. The price is only 5*s.*

The Attorney-General for South Australia recently stated in the Assembly that the expense of exterminating vermin was growing alarmingly, and that the cost this year would be more than £100,000.

Returns from La Plata Mining and Smelting Company (Limited) for September are:—Ore received from the company's mine, 400 tons; total ore received, 5000 tons; ore smelted, 5200 tons; bullion produced, 475 tons; silver produced, 138,000 ozs.

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Gold and Silver.—Messrs. Pixley and Abell write under date October 3:—Gold has been in strong demand for the Continent, for which quarter all arrivals of bar and foreign coin have been taken, and, in addition, withdrawals from the Bank, to the extent of 227,000*l.* have taken place. The Bank has also received 259,000*l.* in sovereigns. The Nile has brought 16,000*l.* from the West Indies, Potosi has brought 108,000*l.* from Australia, Magellan has brought 16,000*l.* from Chili, Paramatta has brought 9000*l.* from the East, Tamar has brought 49,000*l.* from the River Plate, Hawarden Castle has brought 103,000*l.* from the Cape, Leibnitz has brought 34,000*l.* from South America = 340,000*l.* The Maskelyne has taken 50,000*l.* in sovereigns, to the River Plate. Silver has fallen, in sympathy with the Indian exchanges, from our quotation of 47 5/16d. of last week, and though at the beginning of the week a considerable arrival was placed at 47¼d., the price after the allotment of Council Bills, yesterday at 1s. 6 5-32d. has had a fresh relapse, and we may now quote 47⅛d. per oz. standard. We have received during the week 28,000*l.* from the West Indies, 25,000*l.* from New York, 55,000*l.* from Chili, 17,000*l.* from River Plate = 125,000*l.* The P. and O. steamers have taken 53,000*l.* to India.—Mexican Dollars: The portion of the 70,000*l.* brought by the Nile from West Indies, which had not sold for arrival, realised 47 1/16d. per ounce.—Exchange: The 20 lakhs of India Council Bills were allotted yesterday:—Bills on Calcutta Rs. 12,55,000, average rate, 1s. 6 163d; bills on Bombay, Rs. 6,55,000, average rate, 1s. 6·13d.; bills on Madras, Rs. 50,000, average rate, 1s. 6·213d. Transfers on Calcutta, Rs. 1s,00,00, average rate, 1s. 6 343d. Tenders for Bills at 1s. 6 5-32d. receive 71 per cent., and for transfers at 1s. 6 11-32d., in full. The amount for tender next week is again 20 lakhs. The latest Exchanges from the East are:—From Calcutta and Bombay, 1s. 6 3 32d. per rupee: from Hongkong, 3s. 5 15/16d. per dollar; and from Shanghai, 4s. 8¼d. per tael.—Quotations for Bullion: Bar gold, fine, 77s. 9¾d. per oz. standard; bar gold, containing 20 dwts. silver, 77s. 11¼d. per oz. standard; bar silver, fine, 47¼d. per oz. standard; bar silver, containing 5 grs. gold, 47⅝ per oz. standard; cake silver, 50 15/16d. per oz. Quicksilver, 6*l.* 2*s.* 6d. firm, discount 3 per cent.

LEAD ORES.

| Date. | Mines. | Tons. | Price per ton. | Purchasers. |
|---|---|---|---|---|
| Oct. 9 | South Darren | 25 | £12 4 0 | Walker, Parker, & Co. |

BLACK TIN.

| Date. | Mines. | Tons | Price per ton. | Purchase |
|---|---|---|---|---|
| Oct. 6 | Phœnix United | 2 | £59 5 0 | Tamar Smelting Co. |

# Provincial Stock and Share Markets.

Cornish Mine Share Market.—Mr. S. J. Davey, mine share-dealer, Redruth, writes under date October 8:—Although our market has not been active this week, we have had more demand for several shares, and South Crofty, West Kitty, and Wheal Grenville have each advanced ½. Following are prices:—Blue Hills, 16s. to 18s.; Carn Brea, 3 to 3¼; Cook's Kitchen, 10 to 10½; Dolcoath, 73 to 73½; East Blue Hills, 1⅜ to 1¼; East Pool, 46 to 47; Killifreth, 11s. to 12s.; New Cook's Kitchen, ¾ to ⅞; New Kitty, ⅝ to ⅞; Pedn-an-drea, 1½ to 1¼; South Condurrow, 6½ to 7; South Crofty, 7 to 7½; South Wheal Frances, 8¾ to 9; Tincroft, 6 to 6½; West Basset, 2 to 2⅛; West Frances, 8¼ to 8½; West Godolphin, 1 to 1⅛; West Kitty, 8 to 8½; West Polbreen, 12s to 14s.; West Wheal Seton, 4¾ to 5¼; Wheal Agar, 18¾ to 19¼; Wheal Basset 6¼ to 6½; Wheal Grenville, 12½ to 13; Wheal Kitty (St. Agnes), ½ to ⅝; Trevaunance, 2¼ to 2½; Polberro, 1⅞ to 2⅛; Prince Royal, 4s. to 6s.

— Mr. M. W. Bawden, Liskeard, writes under date October 8:—The mining market continues firm for good progressive stock, more especially for those mines which have dispensed with any further calls, and are working at a profit with dividends in prospective. Closing quotations subjoined:—Anderton United, 2s. to 3s.; Bedford United, 5s. to 6s.; Blue Hills, 15s. to 16s.; Carn Brea, 3½ to 3¾; Cook's Kitchen, 10¼ to 10½; Dolcoath, 73 to 73½; Devon Consols, 1¾ to 1⅞; East Blue Hills, 1⅜ to 1½; East Pool, 45 to 45½ ex div.; Gunnislake (Clitters), 2s. to 3s.; Killifreth, 11s. to 12s.; Marke Valley, 2s. to 3s.; New South Caradon, 1s. to 1s. 6d.; Pedn-an-drea United, 1⅛ to 1⅜; Prince Royal, 4s. to 5s.; Phœnix United Mines, 1¼ to 1⅜; Prince of Wales, 7s. to 8s.; South Caradon, 3s. to 4s.; South Condurrow, 6½ to 6¾; South Crofty, 7 to 7⅛; South Frances, 8½ to 8¾; St. Just United, ⅞ to 1; Tincroft, 6¼ to 6½; Trevaunance Consols, 1⅞ to 2; West Basset, 2⅜ to 2½; West Caradon, 2s. to 3s.; West Frances, 8½ to 8¾; West Kitty, 7¼ to 7⅜; West Phœnix, 3s. to 4s.; West Seton, 5 to 5½; Wheal Agar, 19 to 19¼; Wheal Basset, 6¼ to 6½; Wheal Crebor, 17s. to 18s.; Wheal Grenville, 12½ to 12¾; Wheal Kitty, 14s. to 15s.; Wheal Peevor, ½ to ⅝.

— Messrs. Abbott and Wickett, stock and share brokers, Redruth, write under date October 8:—Transactions during this week have not been numerous, but there has been a good demand for East Pool, South Crofty, West Kitty, and Wheal Grenvilles at advanced prices. Dolcoaths continue steady. Quotations herewith:—Blue Hills, ¾ to 1; Carn Brea, 3 to 3½; Cook's Kitchen, 10 to 10¼; Dolcoath, 73 to 73½; East Blue Hills, 1⅜ to 1½; East Pool, 45½ to 46¼; Killifreth, 11s. to 13s.; New Kitty, ½ to ⅝; Pedn-an-drea, ⅞ to 1¼; Prince Royal, 4s. to 6s.; South Condurrow, 6¾ to 7; South Crofty, 6¾ to 7⅛; South Frances, 8¼ to 8½; Tincroft, 6 to 6½; West Basset, 2 to 2⅛; West Kitty, 8 to 8¼; West Frances, 8¼ to 8½; West Seton, 4¾ to 5¼; Wheal Agar, 18½ to 19; Wheal Basset, 6 to 6½; Wheal Grenville, 12¼ to 13; Wheal Kitty, ½ to ⅝. Tin, 91½.

— Mr. John Carter, mine sharedealer, Camborne, writes under date October 8:—The Cornish Share Market has been steady this week, but the turnover in shares has not been large. South Croftys, West Frances, Wheal Grenville, and West Kitty are enquired for at rather better prices. Prices are as follows:—Blue Hills, ¾ to 1; Carn Brea, 3¼ to 3½; Cook's Kitchen, 10 to 10¼; Dolcoath, 73 to 73½; East Blue Hills, 1⅜ to 1⅝; East Pool, 45½ to 46; Killifreth, 11s. to 12s.; New Cook's Kitchen, ¼ to ½; New Kitty, ½ to ¾; Pedn-an-drea, 1 to 1¼; South Condurrow, 6¾ to 6⅞; South Crofty, 7⅛ to 7½; South Frances, 8¾ to 9; Tincroft, 6¼ to 6½; Trevaunance, 2 to 2¼; West Basset, 2 to 2⅛; West Frances, 8¼ to 8½; West Kitty, 8 to 8¼; West Peevor, ½ to ⅝; West Seton, 5 to 5¼; Wheal Agar, 19 to 19¼; Wheal Basset, 6¼ to 6⅜; Wheal Grenville, 12½ to 13; Wheal Kitty, ½ to ⅝; Wheal Peevor, ½ to ⅝. One o'clock, tin, 91½.

Manchester.—Messrs. Joseph R. and W. P. Baines, stock nd share brokers, Queen's Chambers, Market-street, write under date, October 8:—In the absence of prevailing feature the task of reporting upon markets becomes somewhat difficult, and such is the case this week. During the earlier days under notice the feeling of uneasiness touching European affairs kept exerting a depressing influence upon prices, but the outcome of the trouble is not expected to be serious, unless some unlooked for complications are developed, and under this impression, and pending the appearance of likelihood of any such complications, the uneasiness referred to seems to have lost control of the market, and movements in prices appear to be caused more by local influences, but assisted, no doubt, by the more confident expectations of quietness being maintained in Europe. Home railways have, with some exceptions been exhibiting ease in values during most of the week, but yesterday and to-day the downward movement has been checked: as regards yesterday a stoppage of the decline was about all it amounted to, but to-day figures are generally fractionally better. Consols and India Four per Cent. stock each mark a rise of ¼. Foreign Government loans, mark a general advance, but in some cases, amongst which are Egyptians, present figures are rather below best points of the week. Whilst we say a general advance is recorded we must also point out that the rise is in no case by any means a decided one, the changes in most instances being described in small fractions. Colonial Government bonds, &c, keep good. New South Wales 4 per Cent. Inscribed alone mark a fall (of ½), whilst Victoria Four per Cent. Inscribed are 1, South Australian Four per Cent. ⅛, and Cape of Good Hope Five per Cent., 10-40. ⅛ higher. Home corporation stocks, &c., are only actually altered in the case of Liverpool Three-and-a-half per Cent., which quote ⅞ down, but partial changes narrowing margins between buyer and seller have been recorded in two or three instances. The number of transactions reported in the several miscellaneous classes noticed below does not reach a large total, but course of prices herein, on the whole is upward, an exception being found in coal, iron, &c.

Banks, though reporting a comparatively meagre aggregate of transactions, compared with recent times exhibit firmness in tone. There are no cases of decline except a partial one—a reduction in sellers price for Lancashire and Yorkshire of ½, whilst Parr's are ¼ to ½. Manchester and Liverpool District, ⅛; Manchester and County, ¼; and Bank of Liverpool ⅛ higher, besides one or two partial changes also with a stronger tendency.

Insurance.—Dealings moderate in number, as compared with late records. Quotations altered but slightly, and what are changed are irregular in direction.

Coal, Iron, &c., and Mining dull, and again generally lower, the only concern showing better being John Browns, with a rise of 1½.

Cotton Spinning shares have taken a strong upward turn on expected speedy termination of the strike, of which, however, there is publicly very little prospect.

Telegraphs.—Nothing doing here, but prices where changed nearly all better.

Telephones neglected both as regards dealings and quotations.

Miscellaneous.—Transactions desultory, and reach but a poor total. Quotations, beyond a gain in value of Bryant and Mays of ¼, and in Southport Botanics of ⅞ to 1⅛, on the one hand, and a decline of 1 in Suez Canal on the other, exhibit no features of interest.

Railways show very little change on balance for the week, and what these are are irregular. During the earlier portion of the week flatness predominated without seriously affecting prices. Latterly values have rallied to a trifling extent, about recouping previous fall. Canadians, whilst showing fluctuations as usual mark an all round decline (in Trunks) compared with last Thursday, though to-day's traffic gave them some stimulus, and brought a fair rally from lowest points. Americans have see-sawed in response to advices from New York, and on balance show small change on the week. Mexican Rails, after being steady most of the week, mark sensible decline to-day.

Newcastle-on-Tyne.—Mr. S. N. Challoner, stock and share broker, 62, Grey-street, writes under date October 8:—Iron, Coal, and Copper Shares: Barrow Steel, 4½ to 5; ditto Preference, 7⅜ to 7⅝. Bede Metal lower. Business done at 6, and still sellers at the price. Bolckow (20*l.* paid), ½ lower, at 15½ to 16½, and (12*l.* paid) at 7⅜ to 8. C. Cammell ½ higher, at 79½ to 80. Consett Iron ½ lower, at 18⅜ to to 19. Consett Spanish Ore ½ higher, at 4⅜ to 4⅞. Darlington Iron 3s. higher, at 28s.; ditto Preference unchanged at 4¼. Earle's at 16 are unchanged. Ebbw Vales ¼ lower, at 4⅞ to 5. John Abbots firmer, at 55 to 60. John Brown ¼ higher, at 62½ to 63½. Moss Bays sellers at 10. Palmer, A, 20¼ to 21; ditto B, 12¾ to 13¼. Mason and Barry, 7⅛ to 7½; Rio Tinto, 8⅛ to 8½; Tharsis, 78s. 6d. to 79s. 6d.; Steel Company of Scotland, 7 to 7⅛; Sir W. G. Armstrong Mitchells, 136 to 137, ex div. Tees Side Iron Ordinary ⅛ higher, at 11s. to 12s.; ditto Preference, 1⅜ to 1⅝, and firm at the prices. West Cumberland Iron weaker, at 3½ to 3¾.—Gas and Water: Hartlepool Gas and Water, A, 8½ to 8¾; B, 7⅝ to 7⅞, C at 7⅜ to 7½. Consett Water, 6¾ to 6⅞. Newcastle Gas 181, buyers. Newcastle Water 201, buyers; ditto, 1876, 136, buyers; New Ordinary, 6¾ to 7. North Shields Water, 38 to 40.—Miscellaneous: Gateshead Trams, 2⅛, buyers; 3 sellers. High Gosforth Park, 12 to 13; Langdales, 3 to 3½. Lawes', 4½ to 4¾, ex div.; Preference, 10¼ to 10¾, ex div. Newcastle Chemical, 21s., buyers. Linoleum Manufacturing, 25 to 26; American Linoleum, 30 to 35; North-Eastern Bank, 6½ to 6¾. Sadler, B, 9 to 9¼; ditto, C, 4½ to 5. Green Hurth Lead, 4¼ to 5; Cashwell Lead, 30s. to 35s.; Healeyfield, 10s. to 12s.; Patterayke, 4s. to 5s.; Plusheys, 7s. 6d. to 8s. 6d.

## SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

Stirling.—Mr. J. Grant Maclean, stockbroker and ironbroker under date October 8 writes —During the past week the market has been inactive, owing to the unsettled state of foreign politics a nd unfavourable weather. The money market, however, remains easy, and with a little improvement in trade prices would recover.

In shares of coal, iron, and steel companies prices are generally lower. Bull's Iron, 5s. to 6s.; Clyde Coal, 44s. to 45s.: Steel Company of Scotland, 7 to 7⅛; and West Cumberland, 65s. to 70s.

In shares of copper concerns prices have also declined. Mason and Barry announce an interim dividend of 4s. per share. Tharsis touched 78s. 6d., but are now firmer, about 80s.; Arizonas, 8s. to 9s.; Copiapo, 55s. to 60s.; Huntington, 4s.; and Panulcillo, 40s.

In shares of home mines prices do not show much alteration. Glasgow Caradons lower, as it appears the stoppage of a neighbouring mine is likely to cause difficulties with water. Andertons are at 2s 6d.; Caron, 1s. 6d.; Coedy-fedw, 2s. 6d. to 5s.; Devon Friendships, 7d.; East Blue Hills, 27s. 6d. to 30s.; Frongoche, 2s. to 3s.; Gorsedd and Sinclair, 5s.; Goginan, 2s.; Grogwinion, 2s. 6d.; Leadhills, 43s. 9d. to 46s 3d.; New Kitty, 12s. 6d. to 15s.; New Trumpet, 5s.; North Treskerby, 16s.; North Grogwinion, 2s. 6d.; Rhosesmor, 10s. to 12s. 6d.; Van, 27s. 6d. to 30.; and Wye, 5s.

In shares of gold and silver mines there has been more business doing. Montanas have declined from 51s. 6d. to 47s. This company's yield for September has been $77,100, and the expenses $35,000. Silver Cloud shares and Tecoma debentures offered. Kohinoor debentures wanted. Almada and Tiritoe are at 2s. 6d. to 3s. 6d.; Appalonia, 11s.; California, 2s. to 3s.; Cartago, 3s. 6d. to 4s. 6d.; Cankin-Bamoo, 1s. 6d.; Callao Bis, 4s. 6d. to 5s. 6d.; Dovala Moyar, 2s. to 3s.; Indian Consolidated, 3s. 6d. to 4s. 6d.; La Trinidad, 77s. 6d. to 82s. 6d.; Mackay and Revolution, 7s. 6d.; New Emma, 4s. to 5s.; Nouveau Monde, 1s. 9d. to 2s. 3d.; Tecoma, 1s. 6d.; and Victoria, 2s. 6d. to 3s. 6d.

In shares of local and miscellaneous companies prices are steady. Lanark oil shares have improved. Home Mines Trust, 12s. 6d. to 13s. 6d.; Lawes' Chemicals, 4¾ to 5⅛; Nobel's Explosives are about 15⅜.

Edinburgh.—Messrs. Thomas Miller and Sons, stock and share brokers, Princes-street, write under date October 7:—Stocks of most descriptions have been drooping during the past week. The fall in home railway ordinary stock is generally from 1 to 3 per cent. In preference, guaranteed, and debenture stocks there has been few changes. Canadians have declined. Americans have in some cases improved. A moderate amount of business has been done in bank stocks, chiefly at former quotations; but Clydesdale have receded 10s., Commercial 5s., and Royal 10s., while National has improved 20s. North British and Mercantile Insurance shares have risen 2s. 6d., Northern 7s. 6d., Scottish Union and National, A, 2s. 9d. Queen have declined 1s. Edinburgh-American Land shares have improved 6d. National Mortgage and Agency of New Zealand have declined 9d. North British Canadian 1s. 6d. Otago and Southland have gained 3d. Prairie Cattle shares have improved 2s. Swan Land and Cattle have receded 2s. 6d. Rio Tinto (bearer) shares have declined 2s. 6d. Tharsis 5s. Broxburn Oil have fallen 3s. 9d. Pumpherston have risen 5s. West Lothian 2s. 6d. Edinburgh Tramway shares have receded 3s. 9d. Distillers, 2s. 6d. Assets, 14s. 6d.

## THE COPPER TRADE.

Messrs. Harrington, Horan, and Co., Liverpool, write under date October 6:—Chili copper charters were advised on 1st inst. as 900 tons fine. Price of bars was $16·35, and exchange 24¼d. During the past fortnight we have to record a further decline in the price of sharp cash bars to 40*l.*, and three months prompt to 40*l.* 12s. 6d. per ton, the market to-day being quiet at 2s. 6d. to 5s. per ton above these rates. The sales of furnace material comprise—At Liverpool, 145 tons Portuguese ore at 7s. 9d. per unit.—At Swansea, 250 tons Bolivian regulus, ex Prince Alfred, at 8s. per unit.—Precipitate, 170 tons English at 8s. 4½d. to 8s. 7½d., and 1217 tons Mason's at 8s. to 8s. 6d. per unit. Import of Chili copper from 16th to 30th September, 1885, 630 tons fine, against 1125 tons fine same time last year. Delivery of Chili copper from 16th to 30th September, 1885, 1318 tons fine, against 1867 tons fine same time last year. Import of other copper from 16th to 30th September, 1885, 1240 tons fine, against 2394 tons fine same time last year. Delivery of other copper from 16th to 30th September, 1885, 1318 tons fine, against 2273 tons fine same time last year. The total imports of Chili and other copper into Liverpool and Swansea from the 1st of January to 30th ult. were 60,136 tons; deliveries during the same period, 53,743 tons fine; for same time last year the figures were 55,100 and 61,424 tons respectively. Arrivals here from the 16th to 30th September, of West Coast S.A. produce—Aconcagua, from Valparaiso, &c., 14 regulus, 575 tons bars, 100 ingots.—At Swansea: *Nil.*

Stocks of copper (Chilian and Bolivian) in first and second hands on 30th ult., likely to be available, we estimate at—

| | Ores. | Regulus. | Bars. | Ingots. | Barilla. |
|---|---|---|---|---|---|
| Liverpool | — | 1,409 | 26,279 | 120 | — |
| Swansea | — | 2,704 | 5,138 | — | — |
| Total | — | 4,113 | 31,417 | 120 | — |

Representing about 33,387 tons fine copper, against 33,333 tons 15th ult.; against 22,516 tons September 30, 1884; against 27,356 tons September 29, 1883; against 22,560 tons September 29, 1882. Stock of copper contained in other foreign ore and Spanish precipitate on 30th ult., 5454 tons fine, against 4775 tons September 30, 1884. Stock of Chili bars and ingots in Havre on 30th ult., 370 tons fine, against 945 tons September 30, 1884. Stock of Coro Coro Barilla in Havre, 425 tons fine, against 105 tons September 30, 1884. Stock of copper other than Chili in Havre, 915 tons fine, against 290 tons September 30, 1884. Stock of Chili copper afloat and chartered for to 30th ult., 9520 tons fine, against 8590 tons September 30, 1884. Stock of foreign copper in London, chiefly Australian, 5625 tons fine, against 3100 tons September 30, 1884.

Messrs. Strauss and Co., write under date September 30:—

| | August 31, 1885. | Sept. 30, 1885. | Sept. 30. 1884. |
|---|---|---|---|
| Chili bars in Liverpool and Swansea Tons | 30,400 | 31,417 | 21,763 |
| Chili ingots " " | 20 | 120 | 20 |
| Australian and other foreign into London | 5,506 | 5,605 | 3,078 |
| Chili ores and regulus in Liverpool and Swansea | 1,894 | 1,850 | 728 |
| Furnace stuff estimated in fine copper | 5,219 | 5,455 | 4,775 |
| Stock in French ports | 1,821 | 2,210 | 1,340 |
| Chili bars afloat to England including | 7,019 | 7,265 | 4,180 |
| " " France last | 4,250 | 1,934 | 2,500 |
| Chili ores and regulus afloat charters | 250 | 300 | 2,161 |
| Total | 56,388 | 56,156 | 40,550 |
| Prices of Chili bars | £42 10 | £40 15 | £24 0 |
| Prices: Chili bars, spot | £40 15 0 | Prices: Wallaroo cakes | £53 0 0 |
| " three months | 41 10 0 | Precipitates | 8s. to 8s 6 |

Messrs. Brooker, Dore, and Co. in their monthly circular dated October 5th remark:—Tin: The fluctuations of foreign during the past month have been confined to a very narrow compass, the highest point touched being 92*l.* 10s., and the lowest 90*l.* cash for Straits. The deliveries in London for September were better than those for the previous month, but consumers are still buying only for immediate requirements, and forward tin is obtainable at about 20s. per ton under the price of spot, as the opinion is pretty generally held that the present level of prices will not be long sustained. English ingots are quiet at 93*l.* to 93*l.* 10s.—Copper: There is no improvement to report in the position of this metal, and prices have experienced a further fall all round. Chili bars close to-day with sellers at 40*l.* 2s. 6d. cash, and 40*l.* 15s. three months, and no recovery in prices is possible until the present enormous production, both in America and Spain, is checked in some way. Although present stocks are about 7000 tons below the highest so far known, the time does not seem to be far distant when the latter point will be passed, and the record beaten. Strong sheets are quiet at 54*l.*, and India sheets 50*l.* 10s. to 51*l.* Yellow metal sheets are now 4⅞d. to 4¼d., and sheathing 4½d. per pound.—Spelter and Zinc are steady, and the manufacturers are abiding loyally by the conditions of the recent convention, but prices have recently been slightly weakened by the presence of a few second-hand parcels on the market. However, the tone is good, and when these parcels are cleared off a further rise is not improbable. Hard spelter is very firm at 12*l.* 2s. 6d. to 12*l.* 5s.—Quicksilver has been in good demand at 6*l.* 2s. 6d. per bottle, but is now rather easier, and is obtainable at 6*l.* in second hands.

Messrs. French and Smith write, under date October 2:—The volume of business during the past month was not large. Although more sanguine views are generally entertained as to the future, speculative transactions are characterised by extreme caution. The Bank rate continues at 2 per cent., but the money market is tightening.—Iron: From Wolverhampton manufacturers are reported to be busier, but the depression in ship-building influences the whole trade. In the Glasgow Warrant Market prices were pushed up to 44s. on the strength of improved trade reports in America, but the rise has not been maintained, and to-day's price is 42s. 6d.—Tin: The value of foreign fluctuated between 90*l.* and 92*l.* per ton. As is not unusual at this time of the year, the shipments from the Straits have been full, and European deliveries being small, visible supply would have shown considerable increase had not a serious error been found out in the Dutch Trading Company's statistics. The scarcity of Banca Warrants led to an examination of the figures, resulting in the fact that the stock had been overstated by 19,225 slabs Banca, and 1791 slabs Billiton, equal to 650 tons. Another market is thus found denuded of stock, and the fact has an important bearing on the future price of tin. The Dutch Trading Company's sale of Bancs took place on the 30th ult. when 23,287 slabs realised parity of 55½ fl., equal to 92*l.* 10s. Holland. English has been in good demand, and price remains at 93*l.* per ton for ingots.—Copper: There was a sharp decline in value of Chili bars during the past month. On the 28th ult., 40*l.* 2s. 6d. cash was accepted, and 39*l.* 10s. with sellers' option to deliver double over next three months. From this point a reaction set in, and 41*l.* cash was paid, relapsing again to 40*l.* 10s. cash. Disappointed holders in the absence of any favourable feature to point to an immediate rise, have preferred to quit, and thus the decline has been brought about; on the other hand steady buying is going on, but the nature of it is not such as to uphold values. Until there are signs of a decreased production, the public will not be induced to take much interest in the article although prices are very tempting.—Lead: The price receded till it touched 11*l.* for Spanish soft, from which it advanced to the present price, 11*l.* 5s. per ton; English at a proportionate value. Quicksilver, with more active demand, advanced again 5s. per bottle; the quotation is 6*l.* 2s. 6d. per bottle in first hands; second-hand parcels are as usual a little under this.—Spelter has been steady at a slight advance in quotations.—Antimony very quiet, without change in price.

Messrs. Henry Rogers, Sox, and Co., in their monthly metal circular, dated the 8th inst., report:—Iron: The feeling in this market is less hopeful; Scotch warrants have receded to 42s. 6d., and Cleveland iron is also distinctly weaker. Manufacturers are better employed, as a large number of orders were given out under the influence of the better American reports, but buyers again hold aloof, believing that the upward movement will now be followed by a reaction. Reports from Belgium are unsatisfactory, though there is a fair demand for bars.—Copper: The anxiety in the copper market has increased. The large purchases made for investment during the last six months have been taken in small quantities by, what may be termed, small investors. The market has gone so entirely contrary to their expectations that there has been a very general desire to realise, and, as a result, Chili bars have fallen as low as 39*l.* 5s.; in addition a large business is transacted from day to day, which consists entirely of carrying on the market the remainder of these unrealised holdings, and the quantity of cash copper which is thus offered to dealers has the most depressing effect. It is generally believed that some speculative buying on American account took place here at the end of September, but it has quickly ceased, after hardly influencing the market at all. On the other hand, new American contracts for shipment to Europe are believed to be either completed or close to completion, and there is a disposition on the part of smelters to sell forward, even at present prices. Considerable purchases have been made for India at low rates, and this market is now fairly well supplied till the end of the year. Prices still appear ineffective in checking production, and deliveries are less satisfactory.—Tin: The feature of the month has been the announcement of the Netherlands Trading Company, that through some unexplained error their returns of the stock of Banca have been wrong to the extent of 650 tons. Notwithstanding this large arbitrary reduction, our total supplies in sight have increased during the past month 1·0 tons, and there can be no question that, but for the help afforded to tin by the discovery alluded to, we should have receded below 90*l.* in price. We wrote a month ago that there was little to induce outsiders to buy tin, and though Australian shipments for the month have proved unexpectedly light, our remark is verified by the fact that, notwithstanding the reduction in the Dutch stocks, tin has had no decided advance. The interest of the market is no longer centred in the course of supplies as during the last few years. For the moment, the States' production is admittedly stationary, and though Australian houses still report that the next few months will show small supplies from this quarter, so far this year the best authorities on that side have been misled, and shipments have been on much the same scale this last year. No one a year ago in any forecast of the tin market, would have attempted to argue that consumption would fall off materially, but the fact remains that the total estimated consumption of the last 12 months shows a reduction of 2149 tons on that of the previous year, while the English and Dutch deliveries for the first nine months of 1885 are 1580 tons less than those of a similar portion of 1884. The movement has been so gradual and so sustained that it is forcing itself on our attention. Stocks may be very low throughout consumers' hands, at the same time this unexpected development must now be watched as the most unfavourable feature. —Quicksilver: Importers have advanced their prices during the month from 5*l.* 17s. 6d. to 6*l.* 2s. 6d.; but at this latter figure they are undersold by second hands. As the Californian production is now pretty certain to decrease further during the next year, we are likely to have higher prices, and we may see a renewal of the China demand much earlier than is generally anticipated.—Spelter: The market has dropped a little both here and abroad, but with the approach of winter prices should again stiffen.—Lead: Soft Spanish, without silver, has been sold at 11*l.* 3s 9d.; but the general quotation is 11*l.* 5s. The market is somewhat weak, and consumers may perhaps expect to buy a little cheaper before long.

Mr. William Abbott, in his Monthly Circular, says:—"I have just returned from an inspection of the important works of the Rhymney Iron Company, which I had not visited since 1881, and I am much impressed with the value of the many improvements which have been inaugurated and completed in the interval. The extent of the freehold and leasehold property may be judged from the fact that the rentals from it amount to over 8000*l.* per annum. The works have lately been so much improved that the manager informed me that there would now be no difficulty in doubling the present output without any further outlay beyond wages. The 5*l.* fully-paid shares of this company at 30s. are a cheap investment to lock up for better times; but the Seven per Cent. Debentures at 95, yielding as they do 7*l.* 12s. per cent., with three months' dividend accrued (reducing the price to 93*l.* 5s.), are about the cheapest and soundest 'Home Investment in the market."

## WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

We can assure our correspondent that all has been done that could possibly be done in the time. Engines, machinery, and dressing-floors, including a lot of pulverisers, cannot be erected in a day; and considering that Metal and Flow has not yet been at work 12 months, we think wonders have been done so far, though not more than half the pulverisers we estimated upon getting are yet at work, and tin floors, as all know, are usually slow in progressing. Still as the works proceed we make sales of tin, and pay current working expenses, which is what few, if any, speculations have done in 12 months. We have always looked upon Metal and Flow as consisting of two parts—an investment and a speculation. The Flow is an investment, and dependent upon mere machinery. The Metal Mine is a speculation, and, as stated from the first, we hoped to get pulverisers to return 10 tons of tin a month from the Flow, which would pay the whole costs, including the sinking in the shaft on the Metal lode, and leave besides a handsome profit to divide. We hope soon to get to 10 tons a month, and it will be for the shareholders then to decide whether even more pulverisers shall be erected. While the present have been in course of erection and with dressing-floors altogether incomplete we have managed to sell close upon 400*l.* worth of tin from the Flow, and hope to sell another parcel next week, thus establishing its value. Of the Metal Mine the fact must not be lost sight of that it has in the limits of our sett sold tin for upwards of 500,000*l.*, and that the shaft we are sinking is upon the same lode in new ground in the same sett. So far as seen at its present shallow depth it has the characteristics of the lode just before it became so rich in the western part of the sett, and which caused a rise in the shares from 5s. to 40*l.* each. The present manager of Metal and Flow bought them at the former price, and saw them at the latter, so that this is no fiction. Thus we consider the shares worth more than 1*l.* for the Metal speculation alone, to say nothing of the certainty of the Flow; and our correspondent will do well to hold on, to consult the agents, and rely upon the property rather than heed the advice of interested "bears" or those who know nothing of the real merits of the concern.

We question if any other mine can be named that has made such progress in less than one year, and with only one call of 1s. per share. For three months we have paid current working costs from sales of tin from the Flow.

In Mr. Watson's Compendium of British Mining, published in 1843, it is said that the singular mass of copper ore at Ecton Hill was discovered in 1780, and once very productive.

At the time this work was written there were 112 copper mines working in Cornwall, employing 60,000 persons. For the 14 years ending 1841 the returns of the copper mines had been 13,682,810*l.*, the last seven years, down to 1841, having averaged 1,049,821*l.* annually. The tin mines then were little thought of, and only returned 300,000*l.* a year altogether. Now tin is in the ascendant. At the last Cornish ticketing a fortnight ago only two mines sold ores, and of the 440 tons then sold the produce was only 27 tons of copper; and the ores fetched 893*l.* Mellanear sold 400 tons, Trevaunance 40 tons, for 220*l.* The latter however is the mine which, according to Capt. Vivian, may have "hundreds of thousands of tons of copper" before coming to tin. This looks bad for copper rising certainly, but let us hope for the best.

The discovery of wolfram at Prince of Wales may prove of importance. The only mine in Cornwall selling any quantity of it at present is East Pool. It is used for making tungstate of soda we believe and is getting in demand at a good price. We hope by next week to know the value of the lode in Prince of Wales.

The new arrangement at New Langford may ere long lead to good results.

Our last advices (under date 8th) from East Blue Hills state "the water for the stamps is increasing, and within a fortnight the whole 22 heads of stamps will be constantly at work." Thus we hope to double our returns before the steam stamps are erected, and a most suitable place has now been found for them. "The shaft is now down 6 fms., and hope to complete the lift 12 fms. in two months more."

Of Prince Royal we learn, there is still a good lode in the adit end, 5 ft. wide, well defined, tin throughout. This is only 25 fms. from surface, and is described as better than anything seen at the same depth in East Blue Hills, and if a shaft is sunk upon it a rich course of tin may be found very soon.

The 150 cross-cut at the Van Mine will intersect the great lode which has yielded all the great riches, and which has never been seen below the 120. This point, therefore, is not only a most interesting, but most important one, and may be seen in about a month.

## THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA—No. XXIII.

BY THOMAS COLLINGWOOD KITTO, M.E.

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Those persons who have taken the trouble to read all the papers I have written for the *Mining Journal* will know that I have made a professional examination of the whole country from Cape Town to the northern boundary of the Transvaal, nearly 1100 miles north. I have never hesitated to put myself to any trouble or expense in order to examine any spot where gold was reported to have been found. I have been careful to give a true and impartial description of the whole country, and I have no hesitation in emphasising my previous remarks by saying with the exception of the Tatin gold fields—which are beyond the Transvaal—there is not a single place to which I have referred that would pay to work if it was in England instead of being so far away. The area which now demands my attention is becoming very circumscribed indeed, so much so that if it were as rich as the "Munchausens" have represented it to be the Transvaal could not be a great gold-producing country as compared to Australia, Brazil, or California.

During the past three years the mining world has been inundated with prospectus-puffing circulars, and maps, copied from obsolete works, put forward as modern geological surveys. On the strength of a few ounces of gold persons calling themselves experts have declared the Transvaal to be the richest gold field in the world, and altogether the fabricators of fiction in the Boer country have dealt a severe blow to *bona fide* mining. I know that many persons who believe implicitly in every word I write will be inclined to blame me for writing the unvarnished truth about the South African gold fields; but what would be thought of an experienced farmer who knowing that large cargoes of sheep were being imported into this country all suffering from pleuropneumonia if he kept the information to himself while his neighbours were being ruined? There is only one universal answer to such a question. How much more then is it the duty of a professional mining man to offer a timely warning to the public when he sees them being overtaken by a calamity which is much less easily detected than pleuropneumonia, even though he does so at some sacrifice to himself?

The place where appreciable quantities of gold has been found in the Transvaal, and where such large sums of British capital have been hopelessly dropped, is in the district of Lydenberg, which is in the eastern part of the province. The town of Lydenberg is about 125 miles from Pretoria as the crow flies, but by road it is about 185 miles. Soon after leaving Pretoria the road passes near Zwart Kopje, which we took from the Boers, after a severe engagement, on the 6th of January, 1881. All the hills about this part of the country are composed of basalt, while many of the valleys and plains are composed of brown, black, and drab coloured shales, in which there are no minerals of any value. After leaving Zwart Kopje there is very little change in the character of the country until Bronkhurst Sprint is reached. This is the place where the Boers so ruthlessly shot down the men and women of the 94th while they were comfortably seated in the wagons on their way from Lydenberg to Pretoria. Colonel Anstruther had a letter handed to him, and while he was reading it he was shot down without warning in the most cold-blooded manner. After he was dead his depositions were taken, and, like the depositions of all dead people, they were very much in favour of the accused. The incidents in connection with this cowardly and disgraceful affair would fill a volume, but they are too painful to dwell upon even for the sake of exposing the conscienceless English traitors who played into the hands of the Boers. The geological formation in the neighbourhood of Bronkhurst Sprint is chiefly basalt, but to the north of the main road there is a small run of clay-slate, in which there is a course of iron, slightly impregnated with galena (silver-lead ore). Great efforts were made about four years ago to get up a big excitement about this place, and several tons of picked stuff was put in bags, and sent down to Kimberley, where bibacious experts expatiated on its marvellous richness. The spots of lead ore were described as solid silver, and the actual outcrop was said to be of much greater value than any bonanza ever discovered in the United States of America. I was taken to see the stuff by an intending purchaser. I informed him that much better stuff could be found in any of the old debris heaps in Cornwall or Wales, and that the whole thing was a fraud. I received the usual amount of curses, was told I knew nothing about it, and the mountain of solid silver has been allowed to remain as a monument of my stupidity.

From Bronkhurst Sprint to Lydenberg the country is very interesting; high hills and pretty valleys, which are well watered, form an agreeable contrast to the monotinous plains in other parts of the country. I tested hundreds of samples all along the route, but could find no gold. The country is not auriferous, and the people of Middleberg have very sensibly reconciled themselves to this fact long ago. The day before I arrived at Lydenberg I met with a large party of intelligent and well-to-do Kaffirs, who spoke in glowing terms of the prosperity they had experienced under British rule. The names of Moffat and Mackenzie were revered, and stood out in brilliant contrast to those individuals who joined a missionary society merely for the sake of procuring a passage to the Cape. I made careful enquiries of these Kaffirs as to whether they knew of gold being found in any part of the Transvaal. They all declared they never heard of gold being found in the Transvaal until it was discovered by some white men near Lydenberg, about 15 years ago. Three or four at a time began to relate the story I had so often heard applied to other places—that "Mrs. Squires and Mrs. McLachlan went out for a pic-nic, &c., and dig him up with parasol." "Where did it happen?" said I. "Mac Mac," "Spitzkop," "Waterfall," "Pilgrim's" shouted several voices at once. I told them "it was somewhat singular, but I had heard the same story at intervals all the way up from Cape Town," upon which they all burst into such a hearty laugh that it makes me laugh even now to think of it.

On the following day I arrived at the town of Lydenberg, which is no different from South African towns generally. There are several well-built houses, the place is well watered, and, although they get fever amongst them certain months in the year, it is on the whole fairly healthy. I met a wealthy Dutchman here who told me that he removed his daughter from a first-class English school in Pretoria "because the fools taught her to say twenty-five instead of five and twenty," and many others did the same for equally potent reasons. I found branches of the Standard and Cape Commercial Banks at Lydenberg, and, as I had letters of introduction to the managers, I was able to ascertain from them, near enough for all practical purposes, the actual quantity of gold which was being raised from all the diggings. In fact when I left the place I brought away with me on behalf of the banks all the gold in their possession—the declared value of which was 2100*l.*, being the united produce of the "richest gold fields the world"—*vide* experts' reports—for seven months. I have often seen half-a-dozen men in Australia wash out more gold than that of a morning before dinner. I was told that on my arrival at Lydenberg I should find payable gold everywhere in and about the town. There are faint traces to be found in some of the streams, but there is nothing in the neighbourhood that can possibly pay.

The actual gold diggings in the Transvaal are known as Spitzkop, Mac Mac, Waterfall, and Pilgrim's Rest—the last named turning out more gold than all the other diggings combined. Pilgrim's Rest digging is between 20 and 30 miles from Lydenberg (by wagon-road 36 miles) in an easterly direction; for the first 16 or 18 miles the road is fairly good, after which it does not deserve the name of a road—it is no exaggeration to say that one hill before entering Pilgrim's Rest is as steep as the ordinary roof of a house. Sixteen oxen is the usual complement to each wagon in the Transvaal, and this number is employed to take about 10 or 12 cwts. into the gold diggings. In descending the hill near Pilgrim's Rest all the wheels are secured by chains, in addition to which a couple of large boughs are fastened to the wagons by thongs in such a manner that in descending the hill the boughs plough deep furrows in the earth, and is, of course, the primary cause which prevents the load from toppling over, and being dashed in pieces at the bottom. It takes at least 32 oxen to draw an empty wagon out of Pilgrim's Rest under the most favourable circumstances, and I have sometimes seen 48 employed for the same purpose. I mention this to show that the matter of carriage is a serious item, which must be taken into consideration by intending investors in Transvaal speculations. Soon after leaving Break-neck Hill we cross the Blyde river, at the entrance of Pilgrim's Rest diggings. On the left hand side of the creek there is a terrace of red earth, in which there are angular fragments of quartz. The diggers have made a fairly good trial of this terrace, and, although they occasionally found a little gold, it never paid, and at the time of my visit was quite abandoned.

P.S.—I have just been informed by a friend from Africa that the illicit diamond buyers of Kimberley are literally frantic because I have attacked their inner circle, and that certain bald-headed editors are continually making spasmodic dashes at their pate in the hope of finding a hair to pull. I strongly advise them to keep their nails short for fear they may damage the parchment covering.

## SPANISH IRON ORE SHIPMENTS.

Messrs. T. and E. S. BELL, of Bilbao, favour us with the following statement of the amount of iron ore shipped from January 1st to September 30th, 1885:—

| | Tons. | Tons. |
|---|---|---|
| To Wales:— | | |
| Cardiff | 331,464 | |
| Newport | 353,131 | |
| Swansea | 77,573 | |
| Port Talbot | 28,983 | |
| Britonferry | 5,314 | |
| Porthcawl | 2,929 | |
| Llanelly | 838 = | 800,232 |
| To Cleveland district:— | | |
| Newcastle | 163,319 | |
| Sunderland | 53,020 | |
| West Hartlepool | 21,031 | |
| Middlesborough and Stockton | 235,745 = | 473,115 |
| To Lancashire:— | | |
| Garston | 1,959 | |
| Workington | 6,383 | |
| Barrow | 1,505 = | 9,847 |
| To Scotland:— | | |
| Glasgow | 248,687 | |
| Ayr | 14,547 | |
| Grangemouth | 13,096 | |
| Boness | 22,040 = | 298,370 |
| To other parts of England | | 1,900 |
| Total to Great Britain | | 1,583,464 |
| To France:— | | |
| Dunkirk | 195,377 | |
| Bayonne | 71,441 | |
| La Brehalla | 35,483 | |
| Bordeaux | 9,950 | |
| Boulogne | 57,861 | |
| St. Nazaire | 53,940 | |
| Nantes | 216 | |
| Basse Inche | 166 = | 424,434 |
| To Belgium:— | | |
| Antwerp | 77,730 | |
| Ternengen | 63,026 = | 140,756 |
| To Holland:— | | |
| Rotterdam | 415,221 | |
| Germany and Amsterdam | 69,725 = | 484,946 |
| To America:—New York | 4,369 = | 4,369 |
| | | 1,054,505 |
| Total to Great Britain | | 1,583,464 |
| „ other countries | | 1,054,505 |
| Grand total | | 2,637,969 |
| ditto last year | | 2,350,974 |
| Difference (France) | | 286,995 |

## QUEE SLAND GOLD FIELDS.

"MAGNIFICENT YIELDS OF GOLD."

From private information of the prospects of the Charters Towers, and the published returns of the yield of gold from the various mining companies, it will be seen that this is proving to be one of the richest gold fields of the world. From time to time, for several years past, we have recorded the results of this and other Australian gold fields, and advised the more fuller development of those grand fields of enterprise, in preference to British capitalists wasting their money in foreign loans and investments.

In the several Australian colonies we have a magnificent territory, an integral portion of our Empire abounding in untold wealth in mineral, pastoral, and agricultural resources. The best of all tests has been the enormous supply of gold produced in the colonies, and the marvellous effect it has had upon advancing the general prosperity of the British Empire during the past 30 years. Politicians may prate, and political economists may write about the advantages of Free Trade and the advancement of economic science, but could it have been possible for the trade, commerce, and industries of this country to have made such marvellous strides had it not been for the development of auriferous wealth from our Australian colonies? At a time when this country is under a state of alarm about the scarcity of gold and Royal Commissions appointed to enquire into the causes and remedies of the depressed state of trade, it is pleasing to record the fact that from the Australasian section of our Empire we have a vast area of auriferous territory, which, with proper development, is capable of supplying gold to almost any reasonable extent. If thousands and tens of thousands of thoes strong able-bodied young men who cannot find employment or suitable openings in this country were but to consider the advantages of more profitable employment on the Australian gold fields, we can but think they would do well to join that band of workers, the gold miners who have done so much, and are still doing so much, in aiding the general progress of the world. In speaking of Charters Towers as a gold field that offers advantages for a profitable investment of capital and labour, we quote the results of the yield of gold for the month of July as being from 6950 tons 14 cwts. of quartz, 15,475 ozs. 14 dwts. 19 grs. of gold, giving the grand average of 2 ozs. 4 dwts. 11 grs. per ton, the best general yield of any gold field in Australia. The total crushings for seven months from this gold field has been 40,153 tons for 77,422 ozs. of gold, or an average of 1 oz. 18 dwts. 13 grs. per ton, truly a magnificent result.

The future prospects and general indications are such at present that a similar output of quartz with equally favourable results may be safely anticipated for a considerable period in the future.

The only fear anticipated is that a shortness of a supply of water may diminish the output of gold, not that there is any failure of a supply of quartz from the numerous large and well-defined quartz lodes already opened and in course of development; but that, because through the incapacity of the Queensland Government, who do not appear to appreciate the advantages they possess in such a wonderful gold field as Charters Towers, in not providing a water supply, the increase of gold is to be retarded through the ignorance and incapacity of the rulers of the country.

We should have thought that the short-sighted policy of other Colonial Governments in the earlier days of the gold fields, placing restrictions upon the development of the gold mining would have taught all future governments of countries containing auriferous wealth the necessity of affording every assistance to the miners to develope the resources of the gold fields. Here is a case in point, the Charters Towers gold fields badly in want of a water supply, situate within a few miles of a splendid river—the Bendekin—where an unlimited quantity could be obtained to supply the mining and sanitary wants of the town, and in all probability quickly double the output of gold, besides adding to the comfort and health of the inhabitants. The governments that neglect providing an efficient water supply to a gold field like Charters Towers, that as so long given evidence of its permanent sources of wealth incur grave responsibilities, and are unmindful of their position as legislators. We trust soon to hear that steps have been taken to bring an efficient supply of water to the rich gold field, and that the mining industry may not be retarded for the want of that which is so close at hand.

CHARTERS TOWERS.—CRUSHINGS FOR THE MONTH OF JULY, 1885.

| | Tons cwts. | Ozs. dwts. grs. |
|---|---|---|
| Broughton Lease Mill— | | |
| Broughton Consolidated | 200 0 ... | 44 10 0 |
| The Excelsior— | | |
| Day Dawn P.C. (24,000 shares) | 132 0 ... | 222 15 0 |
| Plant Brothers— | | |
| Mexican P.C. | 59 0 ... | 96 0 0 |
| Day Dawn Block and Wyndham | 550 0 ... | 1383 7 0 |
| Hope Gold Mining Company | 139 0 ... | 129 10 0 |
| General Wyndaam— | | |
| Day Dawn Block & Wyndham (24,000 shares) | 1198 0 ... | 2355 4 0 |
| Lady Alice— | | |
| Lady Alice United | 16 0 ... | 10 0 0 |
| Livingstone P.C. | 52 0 ... | 98 17 0 |
| Cummins P.P. area | 18 0 ... | 4 10 0 |
| The Defiance— | | |
| Alexandra Hill (24,000 shares) | 418 0 ... | 750 0 0 |
| Victory (24,000 shares) | 468 0 ... | 494 17 0 |
| The Mosman— | | |
| Eastward Ho (60,000 shares) | 740 0 ... | 4450 19 7 |
| The Enterprise— | | |
| Dan O'Connell | 308 8 ... | 762 15 0 |
| Bryan O'Lynn | 158 10 ... | 162 10 0 |
| Queen Block | 85 10 ... | 220 0 0 |
| The Venus— | | |
| Sons of Freedom | 34 10 ... | 54 0 0 |
| Columbia | 38 0 ... | 24 0 0 |
| St. George | 81 0 ... | 46 0 0 |
| Queen No. 2 (24,000 shares) | 396 0 ... | 602 18 0 |
| Victory | 14 0 ... | 13 0 0 |
| Crousers (surface) | 11 0 ... | 11 0 0 |
| Day Dawn No. 7 | 110 0 ... | 212 0 0 |
| Fair Rosamond— | | |
| North Queen (24,000 shares) | 350 0 ... | 904 9 0 |
| The Mary Louisa— | | |
| Stockholm No. 1 | 15 6 ... | 9 1 12 |
| Rainbow | 11 0 ... | 53 10 0 |
| Stockholm P.C. | 123 14 ... | 74 5 0 |
| The Sisters | 10 1 ... | 53 10 0 |
| Surface | 2 7 ... | 1 13 0 |
| Maggs and party P.P. area | 9 16 ... | 1 8 0 |
| Total | 6950 14 ... | 15,457 14 10 |

Average, 2 ozs. 4 dwts. 11 grs. per ton.

Total crushings for the seven months 40,153 tons for 77,422 ozs.; an average of 1 oz. 18 dwts. 13 grs.

GYMPIE CRUSHINGS FOR JULY.

| | Tons cwts. | Ozs. dwt. grs. |
|---|---|---|
| 1 North Phœnix | 2214 0 ..... | 2547 18 6 |
| 2 and 3 South Smithfield.. | 1449 0 ..... | 1068 15 0 |
| Golden Crown | 1518 5 ..... | 1207 1 0 |
| 3 and 4 North Glanmire... | 886 11 ..... | 1117 19 18 |
| Ellen Harkins | 261 5 ..... | 718 14 6 |
| Wilmot Extended | 80 0 ..... | 401 0 6 |
| 1 North Glanmire | 432 4 ..... | 497 5 13 |
| South New Zealand | 156 10 ..... | 391 7 18 |
| Glanmire Prospectors | 300 0 ..... | 372 1 12 |
| North Glanmire | 262 0 ..... | 339 0 6 |
| Phœnix P.C. | 369 0 ..... | 295 18 0 |
| 7 and 8 Monkland | 262 11 ..... | 190 15 0 |
| Columbia Smithfield | 103 10 ..... | 83 5 12 |
| Total | 8304 17 ..... | 9321 2 2 |

Average, 1 oz. 2 dwts. 9 grs.

Total gold produced for the seven months 50,182 ozs., being 27,238 ozs. less than Charters Towers for the same period.

DIVIDENDS.

| | | |
|---|---|---|
| 1 North Phœnix | 7s. 0d. ..... | £7,000 |
| Golden Crown | 2 6 ..... | 2,500 |
| 2 and 3 South Smithfield | 5 1 ..... | 1,770 |
| 3 and 4 North Glanmire | 0 6 ..... | 1,200 |
| South New Zealand | 1 0 ..... | 1,260 |
| 1 North Glanmire | 0 3 ..... | 300 |
| Total | | £13,970 |

As will be seen by the above report the crushing just put through from the Wilmot Extended gave the splendid yield of 5 ozs. of gold to the ton of stone, 480 ozs. 18½ dwts. being obtained from 80 tons. The result is all the more valuable from the fact that this is the first crushing had from the reef recently discovered in the ground between the Wilmot and Russell reefs.

## NEW SOUTH WALES.

Sir Saul Samuel, the Agent-General for New South Wales, has received the following telegram from Sydney, dated the 7th of October:—

"Stuart Ministry resigned; the Hon. G. R. Dibbs formed new Government. Assembly dissolved to-day. Writs will immediately issue. Ministers are—

| | |
|---|---|
| The Hon. C. R. Dibbs | Secretary and Premier. |
| Sir Patrick Jennings, K.C.M.G. | Treasurer. |
| The Hon. Mr. Abbott | Lands. |
| The Hon. Mr. Badgery | Works. |
| The Hon. Mr. Wright | Mines. |
| The Hon. Mr. Trickett | Public Instruction. |
| The Hon. Mr. Farnell, with a seat in the Upper House | Justice. |
| The Hon. J. H. Want | Attorney-General. |
| The Hon. Mr. See | Postmaster-General." |

HOLLOWAY'S OINTMENT AND PILLS.—Though it is impossible in this climate of changing temperature to prevent ill health altogether, yet its form and frequency may be much mitigated by the early adoption of remedial measures. When hoarseness, cough, thick breathing, and the attending slight fever indicate irritation of the throat or chest, Holloway's Ointment should be rubbed upon these parts without delay, and his Pills taken in appropriate doses to promote its curative action. No catarrhs or sore throats can resist these remedies. Printed directions envelope every packet of Holloway's medicaments, which are suited to all ages and conditions, and to every ordinary disease to which humanity is liable.

## PROGRESS OF THE SOUTH STAFFORDSHIRE MINES DRAINAGE COMMISSION.

The annual reports of the engineers of the South Staffordshire Mines Drainage Commission, which were presented at the annual meeting of that body in Wolverhampton on Wednesday, contain matter of great interest. They show conclusively the progress which the Commission is making, and the excellent work which is being accomplished. The report of Mr. Edward Terry (the Tipton and Bilston underground engineer) stated that, with the exception of the Moxley and Rough Hay Collieries, that there had been a great fall of water during the past year, and this enabled the commissioners' pumps in operation to be reduced from 14 in July, 1884, to eight at the present time, and only two of these are working full. The new engine at the Moat, which was started on the 18th April last, is doing at half speed the work which was formerly done by three of the old engines. It is proposed to pump down the Tipton water in the Bradley engine pit below the bottom coal, and for this purpose a bottom bucket-lift has been put in below the plungers, on which the Bilston water will be caught. Other improvements to this engine, which is soon to be started, are also being made. In order to have absolute control over the large flow of water that will be brought to the engine all the work near the pit bottom has been very substantially done, and two very strong dams with massive cast-iron doors have been built, and valves have been provided for regulating the flow of water when the doors are shut. A similar dam and door have been fixed in the level near the bottom of the Moat engine pit, which enables the water to be shut off in any emergency. This has been successfully tested, and will when shut keep back all the water. The working cost for the year ended Midsummer last has been 15,500*l.*, a reduction of 3978*l.* as compared with the preceding year. During the present year, by the completion of the levels now in progress, three more engines will be put to stand, and the working cost for this fiscal year is estimated at 7000*l.* The average quantity of water pumped in 24 hours during the year ending the 30th June last was 9,450,000 gallons, or 3,475,000 gallons less than last year. The report of Mr. E. B. Marten (surface engineer for the whole area governed by the commissioners) sets forth that some important gaps in the main surface works had been made good during the year, so that the most essential works recommended by the arbitrators are now so far finished that the water from the rainfall has a clear and watertight course to the borders of that portion of the mining district forming the parliamentary area of the commissioners. In the valley of the Tame the whole stream has been cut off from the immense swags caused by the sinking of the mines, and these swags have been kept dry by fixed or portable surface pumps. The surface pumping has proved itself useful and effective. No small attention has been devoted to canal tests and repairs on the Stourbridge Extension Canal, owned by the Great Western Railway Company, on the Stourbridge Canal, and on the Birmingham Canal, No test is deemed so absolutely conclusive as the simple one of separating the part to be tested, and noting if the water will remain at weir level for 24 hours. This is better than the costly searching for the water that may run out. The amount expended on surface working during the year has been 6636*l.* The reports were ordered to be received.

## THE CAPELL FAN.

The following paper, by the Rev. G. M. Capell, was read and discussed at the meeting of the South Staffordshire and East Worcestershire Institute of Mining Engineers, held at the Mining Museum, Dudley, on Monday last:—

When first brought before the public, in 1883, this fan was described thus:—"This fan gives results so remarkable that they tend to prove that all the theories hitherto held concerning the action of fans must be modified." I venture to say that the controversies raised over all published results of trials are a confirmation of the justness of this opinion, and the few facts I shall bring to your notice still further strengthen the conviction I have formed—that in the double action of the new fan, one fan displacing air, and driving it at high velocity through the port holes of a cylinder into the partially exhausted chambers of another fan, we have a new element introduced in mine ventilation—viz., the increased work done by the weight of the downcast column, in consequence of the diminished resistance to discharge from the inner fan into the wide chambers of the outer fan. I now shortly give the results:—

1.—Of a trial against a Guibal fan to compare water gauge and volume.
2.—Against a Waddle type fan.
3.—Against a furnace.
4.—The experiments of Professor Herschel and myself in trying to check the larger experiments with small fans.

The first experiment was at Homer Hill Colliery, in March, 1884. There was a 16 ft. Guibal fan on the colliery with inlet 31 ft. area. My trial fan was a 5 ft. open fan, inlet 4·8 ft. area. To bring the small fan into some sort of relation to its large rival the airways near the downcast were blocked, thus diminishing volume and increasing the drag. We got these results:—

| | Revols. | Drift W.G. | Cubic ft. | H.P. |
|---|---|---|---|---|
| 16 ft. Guibal ..... | 82 | 1 in.... | 11,412 | 8·9 |
| | 93¼ | 1¼ ... | 14,508 | 12 |
| | Revols. | Drift W.G. | Cubic ft. | H.P. |
| 5 ft. Capell fan ..... | 412 | ·50 ... | 11,171 | 6·12 |
| | 535 | 10 in.... | 14,128 | 11·0 |

Of course, the enormous difference in the capacity of the two fans and their inlets compelled the small fan to run at high speed to keep the whole mine under water gauge equal to the large fan, or even nearly so. At once the discrepancy created much surprise. The ½ in. of the new fan taken at the same gauge pipe in the fan drift got up a higher velocity in the air than the ½ in. gauge of the Guibal fan, and the difference appeared to represent a constant of ½ in. gauge; for in another trial the Guibal showing ½ in. gauge, passed 9288 ft., against the 11,171 ft. of the open running fan at the same gauge. The little 5 ft. fan was run several times, and showed at 450 revolutions with the obstructions cleared a capacity of 21,600 cubic ft. at ·50 in. water gauge. For a fan with single inlet, this was the capacity I estimated it would have when I designed it. The new feature with respect to the water gauge on frictional work led to many experiments in water gauge which brought me to the conclusion that gauges may vary considerably. After a considerable amount of seeking, I got an opportunity of running the same open 5 ft. fan on a colliery in South Wales, where a 9 ft. Waddle type fan was at work, substituting my fan after taking the observations with the other fan. Water gauges and air measurements being taken in the same points as in Homer Hill trials.

| | Revols. | W.G. | Cubic feet. |
|---|---|---|---|
| 9 ft. fan, Waddle type ..... | 280 ..... | 2 in. ..... | 15,750 |
| 5 ft. fan ..... Capell fan ..... | 535 ... | 1·60 in. ..... | 18,100 |

After this I got a 11 ft. fan in work on Haunchwood Colliery, near Nuneaton, where I was able to contrast the fan's work with theory of air friction on rubbing surfaces, by the various formulæ in use by mining engineers, with the result that no formula would account for the volume of air passed through the Haunchwood airways at the water gauges shown by the fan. The Haunchwood Colliery consists of two shafts, each 210 yards deep, the upcast 7 ft. diameter, the down-cast also 7 ft., except in the last 25 yards at bottom, which is only 5 ft. diameter. The length of main roads is about 3400 yards; average area, 22 ft.; perimeter average 20 ft. There is one main split from the downcast. The average speed of the fan, which is 11 ft. diameter, with 7 ft. inlet, is now 85 per minute. At this speed the air volume is 22,000 cubic ft. The drift water gauge is ·80 in. The theoretical depression, or water gauge, due to the blade tip speed of an 11 ft. fan at 85 revolutions per minute gives us about ·50 in. as the water gauge, the theoretical speed for ·80 in., being 5340 ft. per minute. As far as my experience with a large number of mines extends and as far as I know from reading all the records I can find about fans, this high water gauge has never before been realised in actual work on mine ventilation at the same periphery speed. The Stavely Guibal fan, at 30 revolutions, which equals 2831 ft. blade tip speed gave only 70 in water gauge. At this point the fan's gauge goes through a transformation which is most puzzling, and utterly at variance with any other fan's action in moving air. From 85 revolutions to 116 revolutions the gauge does not move. The air volume increases from 22,000 ft. at 85 revolutions to 28,975 ft. at 116 revolutions. At 140 revolutions the gauge is only 1 in. At 156 revolutions (only 16 revolutions more) it has risen to 1·5 in., with 39,585 cubic feet per minute. At 180 revolutions the gauge is 2 in., at 210 revolutions the gauge is only 2·4 in. For indications we got 6 h. p. at 92 revolutions, 16 at 140 revolutions, and 46 at 210 revolutions. Bringing out that the water gauges of these fans do not always follow the squares of the revolutions nor the power, the cubes, as I contended at the first. Theoretically the drag to pass 39,585 cubic feet per minute through Haunchwood Colliery is enormous. The question was asked in the *Colliery Guardian* (dimension of air ways and lengths being given) what horse power and water gauge would be required to pass 45,000 ft. through such a mine. The answer gave the water gauge as several feet, the horse power as above 400. Actually the pair of 8 in. by 18 in. stroke engines, and steam at 40 lbs. on boiler, have passed over 50,000 ft. through the mine per minute. In tests for volume, with three doors open in the winding top of the upcast, the fan gave 72,026 cubic feet per minute at 1·20 water gauge, revolutions 160 per minute. The work on Haunchwood Colliery was a clear test of the fan's work against heavy friction, and went far to show the peculiarity of the fan's gauge when dealing with frictional resistance, the gauge having a tendency to change its ratio of rising when on high frictional resistance. The next series of tests made were on a 12-ft. single inlet fan at Birch Coppice Colliery, near Polesworth. The inlet of this fan was 7 ft. 9 in. diameter, leaving only 2 ft. 1½ in. on each side for outer fan. The engines were a pair of 12 in. by 15 in. stroke. It was found one cylinder, cutting off at one-third of the stroke, could do the work, so one cylinder only is now used; boiler pressure, 37 lbs. The shafts of this colliery are upcast, 16 ft. diameter, depth 272 yards, but the upcast for 62 yards at the lower end, is only 11 ft. diameter; downcast, 16 ft. diameter; depth, 272 yards. Two seams of coal are worked, one at each level. The aggregate length of roads is 6659 yards. It was ventilated by two furnaces. Before the fan was fixed, observations of the air at the return were taken with ·75 in. gauge; the air volume was 48,000 ft. just before the fan was fixed; at 1·25 W.G. the air volume was 62,000 cubic feet per minute. On July 24th before the shaft was cool tests gave revolutions, 120; volume, 60,000 cubic feet; W.G., ·70 in.; horse-power indicated, 10·8. Revolutions, 137; volume, 73,000 ft.; W.G., ·85 in. to ·90 in. Since that date the air has been checked, and alterations made; so that the comparison with the furnace is lost, but 70 in. at the fan produces 60,000 ft. in several measurements, against 48,000 cubic feet for ·75 in. at the furnace before these alterations are made. I have now the records of the fans, regular work at Birch Coppice Colliery, air measured at the returns and at the fan after careful observations.

| Revols. | Cubic ft. | W.G. on drift door. | H.P. in air. |
|---|---|---|---|
| I.—152 ..... | 70·280 ..... | 1·10 ..... | 12·12 |

$$\text{Diagram} = \frac{\text{Area.} \times \text{Mean Pressure} \times \text{Stroke.}}{33{,}000} = \frac{110{\cdot}7 \times 2 \times 17{\cdot}9 \times 15}{33{,}000} = \text{Indicated H.P. } 21{\cdot}9$$

II.—Test to find capacity of fan.

| Revols. | Cubic ft. | W.G. | Doop open on |
|---|---|---|---|
| 152..... | 118·498 ... | 0·45 in. | pit top. |

The main point I wish to dwell upon is the fact that the open fan's gauge passes far more air than the proportion of the square root of the furnace gauge. Taking the last observations before the fan began to work—48,000 ft., with ·75 in. W.G., we find that 1·5 in. gauge would only have given 65,500 ft., but from this gauge the shaft and drift friction would have to be deducted in calculating the gauge below the ground. Thus more air comes with this fan's gauge than with a furnace gauge, and the curious feature is that it is again just about half-an-inch difference between the observed gauge, and the gauge which would be due to a furnace to do the same work, just as in the Guibal and Waddle fan it was about the same difference. Where, then, are we to find the equivalent of the missing ½ in. of water gauge? I say in the difference of discharge resistance between this double fan and others. On its own gauge the fan gives a good result, about 56 per cent. efficiency as an open fan at Birch Coppice Colliery. Without noting the increased velocity it gets in the air, 70,000 ft. with a 12-ft. diameter single inlet open running fan has I believe never been reached before. By duplicating the fan—*i.e.*, by a double fan built on one disc, all results of volume can be doubled in the same diameter. Rope driven, such a fan can with ease pass 200,000 cubic feet per minute on a mine with suitable airways, to do so at 1·25 water gauge. In conclusion, I will mention that in experiments with Professor Herschel, at Passenham Rectory, we found that in trials on fixed frictional resistance the same fan when enclosed gave:—W.G., 1 in.; air speed, 454. Same fan, case removed:—W.G., 1 in.; air speed, 519. Fan enclosed:—W.G., 2 in; air speed, 630. Fan enclosed:—2·5 in.; air speed, 702. Fan, case removed:—W.G., 2 in.; air speed, 704. The frictional resistances were a fixed quantity. Air speed and water gauges were taken at the same spot. I should occupy too much time to relate all the tests made with various fans to establish the difference of results with different machines at the same water gauges on the same friction. The ½ in. of lost gauge appears in the tests of closed *v.* open fans. When the same fan is used, and if lost sight of then when I have an enclosed fan, as I soon shall, working on a mine, it will show on its gauge 25 per cent. more work than open fans of the same make and dimensions doing the same work. I throw out, as a suggestion, that to compare the work of two fans on a mine it may be necessary to use the formula

$$\frac{\text{Volume} \times \text{W.G. Pressure}}{33{,}000}$$

and also the formula

$$\frac{W = M\,V^2}{2g}$$

adding both results together. Thus the fan that gets the higher air speed with a given power will show a higher result on formula

$$\frac{= M\,V^2}{2g}$$

and a lower result on

$$\frac{\text{Volume} \times \text{W.G. Pressure}}{33{,}000}$$

and when this double result is compared with the indicated horse-power in each case I think a useful comparison will be arrived at. What is wanted in colliery ventilation is air, and the machine that can get the largest amount of work out of the downcast column pressure must get the most air at the lowest possible water gauges; for, after all, that is the power that does the work in all exhaust ventilation. The great differences in water gauges between the fan at Haunchwood and the fan at Birch Coppice is due to the vast difference in air-way friction in the two mines. A small fan on large work expends some of its water gauge in velocity, and, if the drag is small, does not show its full gage, which would be brought out by friction. Only when a fan is of larger capacity than its work will it show at all times the highest gauges it can produce at its test speeds, and in open running fans no benefit results from placing too large a fan for a given work. In giving the results of my observations on water gauges, I wish to express no opinion yet on the efficiency question as regards fans on mere "velocity" work, but this I may say, that I find with the open fans that the water gauge of velocity in the full open tube on the inlet is identical with the water gauge produced by the fan with closed inlet at the same speed, and that in the test of drawing air through inches of water, the water displaced is the same in height as the fan produces in water gauge at a closed inlet with the same number of revolutions. In recent dynamometer tests made with specially prepared machines by the Société Anonyme des Anciens Usines Cail. In Paris, the blast fans blowing under 11 in. pressure of water, gave 90 per cent. efficiency. The open exhaust fans, showing 8 in. water gauge, gave no less than 120 per cent., causing the remark that the principles of air measurements must be altered, as they are absurd. The Society Cail has taken up the manufacture for France, as the result of their tests.

## SOUTH STAFFORDSHIRE MINES DRAINAGE COMMISSION

The annual meeting of the South Staffordshire Mines Drainage Commissioners was held at the offices, Wolverhampton, on Wednesday. Mr. Walter Williams, Chairman, presided, and the other members present were:—Messrs. Walter Bassano, Edmund Howl, E. Fisher Smith, B. Hingley, E. K. Harrison, J. W. Williams, M. P. Grazebrook, Richard Williams, J. B. Cochrane, Ben. Whitehouse, Wilson Lloyd, Daniel Groucutt, John Raybould, Job Garratt, J. E. Swindell, George Allan, John Aston, and William Lee, together with Mr. H. Smith (secretary), &c. Mr. Walter Williams was re-elected Chairman, on the motion of Mr. M. P. Crazebrook, seconded by Mr. R. Williams. The report of Mr. E. B. Martin, C.E. (chief engineer), upon the surface works, set out that some important gaps in the main surface works had been made good during the year, so that the most essential works recommended by the arbitrator were now so far finished that the water from the rainfall has a clear and watertight course to the borders of that portion of the mining district forming the Parliamentary area of the Commissioners. No small attention had been devoted to canal tests and repairs on the Stourbridge Extension Canal owned by the Great Western Railway Company, the Stourbridge Canal, and the Birmingham Canal. The Extension Canal was only a few miles long, and the owners professed to be ready to mend any defects proved, but refused special tests. The Birmingham Canal, extending for about 100 miles in the mining area, was of far greater importance. Tests had not been refused, but delayed. Meanwhile the serious consequences to the mines continued. The amount expended on surface works during the year had been 6636*l.*, of which 4218*l.* was charged to capital, and 2418*l.* to revenue account.

The report of Mr. Edward Terry, mining engineer to the Tipton district, stated that the level of the water at nearly all the pumping stations had fallen considerably during the year. In July, 1884, the Commissioners were working 14 engines, which were now reduced to eight. Only two of these, Stowheath and Horseley, were working full time. The new engine at the Moat, which was started last April, enabled the Commissioners to at once stop three engines. It was now proposed to pump down the Tipton water in the Bradley engine pit below the bottom coal. This pump would be ready for starting in a few days. The working cost for the year ended June 30 had been 15,500*l.*, a reduction of 3978*l.* on the preceding year, the bulk of the saving being effected during the latter half of the year. Mr. Terry estimated this year's cost at 9060*l.*, and that for the year after at 7000*l.* During the year 1368 yards of level had been driven, 1196 yards arched, and 80 yards inverted, at a cost of 7805*l.* The level was now open to the Moat engine-pit to Horseley bye pit, where it received the water about 30 yards lower than the present level of the Horseley pumps, thus draining mines that had been for years under water. The new level, which had been driven 102 yards to the north from the Bradley engine-pit, had yet to be extended about 230 yards before the body of the Bilston water would be brought to the new pumps. Owing to the completion of the surface works, and, in a measure, to the dry season, there had been a diminution of nearly 3,000,000 gallons of water per day in the quantity raised during the year. The report of Mr. W. B. Collis on the Old Hill district stated that the mines in that district had been effectually drained during the year. The report of the secretary (Mr. Henry Smith) stated that the late colliers' strike entailed a loss to the Commissioners of about 10,000*l.* in revenue.

Mr. Cochrane, remarking on the surface engineer's report, said the Commissioners, if they had sufficient power, should compel the canal companies to repair their waterways. The whole of the district was suffering greatly from their defects.

Mr. R. Williams said there was no subject at the present time which more seriously demanded definite action on the part of the Commissioners. He thought that the work of the Commissioners would be abortive until the canals were rendered watertight. The Commissioners should take up the subject with all their legal powers, and compel the canal companies to allow tests.

Mr. Wilson Lloyd said that Wednesbury and Darlaston were benefiting very little from the work of the Commissioners. He desired that further levels should be driven.

The Chairman, referring to the reports, said they seemed, on the whole, satisfactory. As to the defects in the canals, he thought that tests should be enforced. The 13 local town corporations who turned some of their water on to the surface, and which percolated through into the mines, had also to be urged by the Commissioners to improve their works. The level towards Moxley and Wednesbury was being driven as fast as possible, and the triumvirate would continue their policy of making levels wherever they thought that economy could be effected.

The reports were ordered to be received.

The Chairman moved that the statement of accounts for the year ending June 30 should be allowed. This showed that the liability of the Commissioners amounted to 89,761*l.* The assets were made up of—13,368*l.* at bankers (of which general drainage figured at 7280*l.*), 5982*l.* due upon the rates, 1090*l.* from sundry creditors, 6488*l.* by suspense accounts, and 61,507*l.* by general drainage revenue, Tipton mines drainage capital, and Old Hill drainage revenue.

Mr. Cochrane suggested that the money which the accounts showed was in the bankers' hands was not being utilised to the best advantage, and that the capital account was being increased inordinately by the charging to that account of pumping expenses, which ought to go to the suspense account.

The Chairman said that the questions which had been asked were answered on the face of the accounts.

The motion that the accounts be allowed was carried unanimously.

Mr. E. Fisher Smith moved a vote of thanks to the triumvirate for their past services.

The Chairman, in thanking the meeting, said the triumvirate had endeavoured to do their work with all the ability which they possessed, but they did not profess that their schemes were perfection. When a real revival in trade arrived he hoped that the works of the Commissioners would be in such an advanced state as would meet all the requirements of the district.

There was no other business.

## THE MONTANA COMPANY (LIMITED).

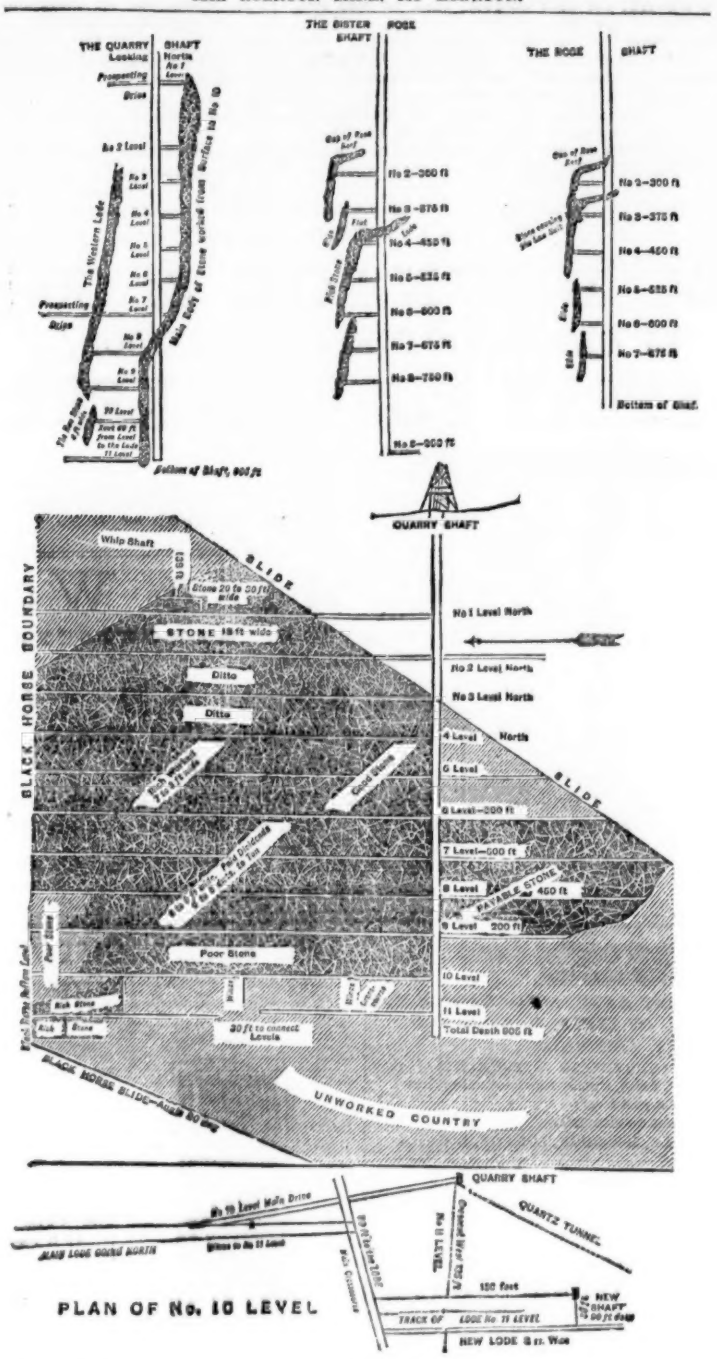
The secretary has received the following telegram from the manager at the mine, dated October 4th:—During September month the 50 stamp mill worked 28 days—50 stamps—and crushed 2800 tons, yielding $70,000 including clean-up, averaging $25 per ton. The 10-stamp mill worked four days—10 stamps—and crushed 48 tons, yielding $3900, averaging $81·25 per ton. Total of ore crushed September equal to 2848 tons. The total yield is as follows:—50-stamp mill, $70,000; 10-stamp mill, $3900; tailings concentrated by machines, $500; ore shipped to smelting-works, $2700: total, $77,100. The ordinary working expenses for the month were $25,000, and extraordinary ditto $10,000. In this is included $5000 on developing the mine, the balance for addition to Cruse Mill, &c. Will remit $30,000 on account of profit. The directors have received from the mine a remittance of 3300*l.* in cash, and have sold bars of bullion, shipped to London, to the value of 2232*l.*, on account of profit for August.

Prohibition of Foreign Dynamite into Germany.—The Imperial Railway Department of Germany has just issued an order setting forth that on and after the 1st November next explosives, such as dynamite, blasting, gelatine, &c., unless of German manufacture, are no longer to be carried on the railways of that country. This order is admittedly based on reasons partly economical and partly political. It appears that the dynamite now made in Germany is more than sufficient for the local demand; hence the introduction of this protective measure. The political considerations are not indicated in the order. This prohibition excludes from Germany the manufactures of all foreign companies.

Tramways.—The closing prices of this evening, as quoted by Mr Wm. Abbott, of Tokenhouse-yard, are given in tabular form in the Stock and Share List page of th Journal.

# THE BALLARAT GOLDFIELDS.

## THE EGERTON MINE, AT EGERTON.




The view given above of the shaft, levels, and workings of the celebrated Egerton Quartz Mine is taken from the plans published in the Melbourne *Argus* (August 19), and will show the systematic method of gold mining as now conducted by many of the leading gold mining companies in Australia. The Egerton has become a famous and, I might say, historic mine in the annals of Victorian mining. The outcrop of this gigantic reef, as I remember it on the surface and the great open quarry in 1855, had been discovered in the earlier days of the Victorian gold discoveries (1851), and surfacing around the reef and washing the free gold from the quartz by the first crude methods of crushing first brought the Egerton quartz reefs into notice. At the time I speak of—in the early part of 1855—the hill was occupied by co-operative parties of working miners, amongst whom I found some of my shipmates who had arrived with me the year previous at Melbourne. They and others—a party of ten men—occupied a good claim on the lode, and had a large body of quartz stacked, but no machinery was then on the field for crushing, and the nearest and only quartz-crushing battery being then at Ballarat, some 15 miles away, when the price of cartage was about 5*l.* per ton, and a similar price for crushing at the mill, so that it can be understood nothing but picked stone was worth carting the distance, and incurring the high charges of crushing at the mill. Machinery of a crude character was soon after brought upon the field, and mining in the various claims was conducted with varied success, enough to prove that there existed a magnificent main lode with several branches that only wanted what was not then so much understood—systematic development by vertical shafts, and efficient machinery to crush the quartz when raised. The Messrs. Learmouth, of Ercildoen, the well-known squatters, bought up several of the small claims, put up machinery, and commenced a better system of mining under the management of Mr. William Baily, and excellent results were obtained by working at comparatively shallow depths from the Quarry and Rose shafts, and it was reported that the Messrs. Learmouth made profits in a few years of over 50,000*l.* The yield of gold afterwards fell off, and the stone became poor. At this time, as these gentlemen, who were among the first of Australian squatters who were engaged in gold mining, had decided on selling out all their station property this mine became for sale, and was offered with all the machinery for some 13,500*l.*, and for a long time found no buyers. At last Mr. M'Loughlin, a well known mining speculator, in conjunction with the former manager (Mr. Baily), Mr. J. Williamson, and Mr. Owen Edwards bought the property, and soon after they had possession, which was given on the 19th September, 1873, by rising a few feet higher than the rise was then rich stone was struck again, and the crushings began quickly to give large returns. The Messrs. Learmouth laboured under the impression that the rich stone had been found prior to the sale, and its discovery kept secret, and they entered an action against the new owners to recover possession of the property. The law suits lasted some three years, caused great excitement in the colony, and cost something like 80,000*l.*, and probably much more. The results of the three trials were that the purchasers obtained a unanimous verdict upon the issue of fact, a decree in their favour by the primary judge, which was upheld on appeal to the Supreme Courts. The Messrs. Learmouth intended appealing to the Privy Council against the decisions, but a settlement was arrived at by the new company which had been formed to purchase the mine paying its own costs; the full amounts on both sides will probably be never known. A good deal of ill-feeling was engendered at the time, which has been since smoothed over, and the Egerton Mine became a great success, in consequence of the efficient manner the mine has been worked. The main lode as worked from the Quarry shaft went down, as will be seen, nearly perpendicular, crossing the shaft between the seventh and eighth levels, where it is again vertical to the bottom level, at 905 feet. In the Quarry shaft the workings were above No. 5 level when the mine was sold. In this level years afterwards some of the richest gold ever won from a mine was struck, and was known as the "Bank," from which yields were regulated. The gold carried the quartz instead of *vice versa*, and some of the pieces were so large that they were cut with a chisel, and sold in that condition.

In 1874 the company was registered under the Limited Liability Acts, with a capital of 100,000*l.*, in 25,000 shares of 4*l.* each—3*l.* 15s. is paid up. Work was commenced with great spirit, and the Rose and Sister Rose shafts sunk. The supply of stone increased so rapidly that the battery—23 head of stamps—could not crush the stone fast enough, and 20 heads more were added to the crushing power. The yield of gold has varied considerably at different levels, and places in the lodes, but the results show a good average. The total value of gold won from the mine by the present company has been 603,403*l.*, and the dividends paid to shareholders 282,604*l.* The total yields obtained by former owners are not attainable; but, as a number of miners were profitably employed in and about this mine for years, and some good yields obtained, it would not, I think, be over-estimating the entire profits from this mine since first opened at half a million sterling. Important discoveries have lately been made in this and the adjoining mine, the Black Horse United, which has yielded handsomely, and paid about 80,000*l.* in dividends. The management of the Egerton Mine has lately decided to sink a new shaft, 2000 ft. in depth. It is already down over 100 ft. in good sinking country; size, 12 ft. by 4 ft. 6 in. in the clear, and will be sunk 1000 ft. before the first level is opened. As the permanency of this lode has been so long established there is every probability of its being a rich mine below the 900 ft. levels, to where it is now partially worked, as it has been above, and the Egerton Mine will be again heard of as one of the leading mines of the colony.

I have long advocated the amalgamation of small claims into good sized areas and the continuous sinking of shafts on well-defined quartz lodes, and opening out and systematically cross-cutting the country, and prospecting at intervals of about 100 feet. As regards the prospects not only of the Egerton Mine, but many others in the colonies, it is to be regretted that this had not earlier been adopted. If the proprietors of the Egerton and Black Horse Mines could but make arrangements for the amalgamation of their properties to be worked under one system, and place a portion of their stock on the English market, it would, I think, be beneficial to them and mining generally, as there is a large amount of English capital awaiting investment in *bona fide* gold mining, and the investment in such properties as that, when it is determined to push on the works with energy by sinking a new shaft, is one I could confidently recommend as a legitimate enterprise. Having been occasionally interested in, and watched the career of, the Egerton Mines for 30 years, and the results proving so satisfactory down to 900 ft., there is little doubt of their future success to 2000 ft., and perhaps more.

THOMAS CORNISH, M.E.,

Author of "Our Gold Supply: Its Effects on Finance, Commerce, and Industries."

# LIVERPOOL CORPORATION STOCK.

**Interest at £3 10s. per cent. per annum, payable quarterly at the Bank of England, or any of their Country Branches.**

FOURTH ISSUE—£1,500,000 STOCK.

MINIMUM PRICE OF ISSUE, £99 PER CENT.

FIRST DIVIDEND PAYABLE ON 1ST JANUARY, 1886.

Special attention is invited to Section 9 of "The Liverpool Corporation Loans Act, 1880," which incorporates Section 27 of "The Local Loans Act, 1875," and gives to Trustees and other persons for the time being authorised or directed to invest any moneys in the debentures or debenture stock of any railway or other company (unless the contrary is provided by the instrument authorising or directing such investment) the power of investing such moneys in inscribed stock issued under the Act as they have of investing such moneys in debentures or debenture stock of any railway or other company.

The BANK OF ENGLAND give notice that by arrangements made with the Corporation of Liverpool, under Section 12 of "The Liverpool Corporation Loans Act, 1880," and in pursuance of a resolution of a City Council, they will be prepared to RECEIVE TENDERS for £1,500,000 of LIVERPOOL CORPORATION STOCK, bearing interest at £3 10s. per cent. per annum, payable quarterly at the Bank of England or any of their Country Branches.

The Books of the Liverpool Corporation Stock are kept at the Bank of England, where all assignments and transfers are made; and holders of the Stock have the option of taking out Stock Certificates to bearer, transferable by delivery, with coupons attached, at the same rate of charge as in the case of Government Stock.

Dividend Warrants are transmitted by post, when desired.

Transfers of Stock Certificates to bearer are free from stamp duty.

By an Act of Parliament entitled "The Liverpool Corporation Loans Act, 1880," the Corporation of Liverpool are empowered to issue Stock for the moneys they are authorised to borrow, under their several Acts of Parliament, for the purposes of Waterworks, Street Improvements, Improvements under the Artizans' and Labourers' Dwellings Act, Sanitary and Paving purposes, Parks, Tramways, and other public requirements.

The securities for the Stock thus issued are the rates leviable by the Corporation over the whole rateable property in the City of Liverpool, and (as regards the water supply) over an area of more than 60 square miles, including the City. The City rate is unlimited in amount.

The real and personal estate of the Corporation, the former of which comprises a large area in the central part of the City, form also a primary security for the Corporation Stock. The income from this source in fines on leases and renewals of leases, annual rents, tolls, and interest on investments, apart from receipts derived from Waterworks, Tramways, and Rates, has amounted to an average of over £123,000 per annum during the past five years, and the Corporation also own the Waterworks and Tramways, which have cost over £4,196,000; the former yields a revenue of £221,000 per annum, and the latter £29,000 per annum, making an aggregate income of £373,000 irrespective of the amonnt received from the ordinary rates of the City, which, with the Public Buildings, Parks, and other municipal property acquired under various Acts, form an additional security to the holders of Corporation Stock.

The indebtedness of the Corporation is £5,951,250 as respects Stock already issued, and £402,276 on mortgages, for the redemption of which provision is annually made under the several Acts of Parliament. The amount of the several Sinking Funds (exclusive of £250,000 at the credit of the Waterworks Depreciation Fund) thus accumulated is £579,969; of this amount £499,141 is already invested in Corporation Stock, which in due course will be cancelled, and the balance, with the moneys to be set aside for the redemption of debt, will be applied from time to time in the purchase of Stock in the open market for cancellation.

About £1,000,000 of the present issue of Stock will be applied to the repayment of temporary loans obtained in anticipation of this issue, the balance being required for the new Waterworks (the construction of which is now well advanced), Street Improvements, Tramways, and Artisans' and Labourers' Dwellings.

Tenders may be for the whole or any part of the Stock, and must state what amount of money will be given for every £100 of the Stock. Tenders for other than even hundreds of Stock, or at a price including fractions of a shilling other than sixpence, will not be accepted. Tenders are to be delivered at the Chief Cashier's Office of the Bank of England before Two o'clock on Friday, the 16th day of October, 1885. Tenders at different prices must be on separate forms. The amount of Stock applied for must be written on the outside of the tender.

The minimum price, below which no tender will be accepted, has been fixed at £99 for every £100 of stock.

A deposit of five per cent. on the amount of Stock tendered for must be paid at the same Office at the time of the delivery of the tender, and the deposit must not be enclosed in the tender. Where no allotment is made the deposit will be returned, and in case of partial allotment the balance of the deposit will be applied towards the first instalment.

In the event of the receipt of tenders for a larger amount of stock than that proposed to be issued at or above the minimum price, the tenders at the lowest price accepted will be subject to a *pro rata* diminution.

The dates at which the further payments on account of the said loan will be required are as follows:—

On Tuesday, the 3rd November, 1885, { so much of the amount tendered and accepted as, when added to the deposit, will leave Seventy-five Pounds (Sterling) to be paid for each hundred pounds of Stock.

On Tuesday, the 1st December, 1885, £25 per cent.;
On Tuesday, the 5th January, 1886, £25 per cent.;
On Tuesday, the 2nd February, 1886, £25 per cent.

The instalments may be paid in full on or after the 3rd November, 1885, under discount at the rate of 3 per cent. per annum. In case of default in the payment of any instalment at its proper date, the deposit and instalments previously paid will be liable to forfeiture.

Interest on the total amount of the stock calculated from the 1st October, 1885) will be payable on the 1st January following.

Scrip certificates to bearer, with a coupon attached for the dividend payable 1st January, 1886, will be issued in exchange for the provisional receipts.

The stock will be inscribed in the bank books on or after the 2nd February, 1886, but scrip paid up in full, in anticipation, may be inscribed forthwith.

No tender will be received unless upon the printed form, which can be obtained at the Chief Cashier's Office, Bank of England; of Messrs. Mullens, Marshall, and Co., Stock Brokers, 4, Lombard-street, London, E.C.; or at the City Treasurer's Office, Municipal Buildings, Liverpool.

Bank of England, London, 7th October, 1885.

A DESIDERATUM.—A MINING MAP OF CORNWALL, showing the position of every Mine in the County, will be forwarded, post free, to every person who remits Five Shillings to the Author, R. SYMONS, Surveyor, Truro.

SOUTH DEVON.

TO BE LET, A VALUABLE MANGANESE SETT, about two miles from a railway station.

Apply to Mr. E. CUMMING, The Sanctuary, Ilsington, Newton Abbott.

THE COMMISSIONERS OF INLAND REVENUE hereby give notice that, under the Customs and Inland Revenue Act (48 and 49 Vic. Cap. 51) of last Session, all bodies corporate and unincorporate, are required to pay a DUTY at the rate of FIVE PER CENT. upon the annual value, income, or profits, accruing to them from their real and personal property.

With a view to the assessment of the duty all such bodies are bound, under heavy penalties, to render returns, supported by full accounts, before the 1st December next.

Applications for Forms of Return, and all enquiries, should be addressed to—

The SECRETARY, (Corporation Branch),
Inland Revenue, Somerset House, W.C.

## A GLAMORGANSHIRE COLLIERY FOR SALE.

TO BE SOLD, BY PRIVATE CONTRACT, as a going concern, a COLLIERY in Glamorganshire, situated about midway between the shipping ports of Cardiff and Swansea, adjoining to and having commodious sidings in connection with the Great Western Railway system.

The mineral area is upwards of 500 acres, and is held from two landlords upon very favourable conditions, the Royalties being exceptionally low. The unexpired term of the leases is about 40 years.

There are two pits sunk on the property, both of which are fitted up with winding machinery, but only one is used at present for raising coal.

The colliery is ventilated by a Waddle fan. On the surface is erected an excellent pair of horizontal air compressing engines, by John Fowler and Co., of Leeds, for driving the hauling engines underground.

There is also a large number of coke ovens, coal washing apparatus, &c., in connection with the colliery.

The quantity of coal now worked is about 1300 tons per week, but this could easily be considerably increased.

The plant is of modern description, and capable of dealing with a much larger output.

For further particulars apply to Messrs. BASSETT, BASSETT, and LEE, Civil and Mining Engineers, Church-street, Cardiff.

## IMPORTANT TO CAPITALISTS, MINERS, FURNACE PROPRIETORS, AND STEEL MANUFACTURERS, &c.

### VALUABLE HEMATITE IRON ORE MINES, IN THE FURNESS DISTRICT.

TO BE SOLD BY AUCTION, BY MR. ROBERT CASSON, at the County Hotel, Ulverston, in the county of Lancashire, on THURSDAY, the 15th of October, 1885, at 3 o'clock P.M., in three Lots, unless previously disposed of by Private Contract, of which due notice will be given, the following

### VALUABLE IRON ORE MINES

The property of the ULVERSTON MINING COMPANY (LIMITED):—

LOT 1.—The Mines known as CROSS GATES and EURE PITS, with the mineral rights and power to get iron ore over an area of 95 A. 3 R. 24 P., statute measure, more or less, and the offices, engine houses, and other erections; pumping and drawing engines, and other machinery and effects, the property of the company, within the limits of the royalty.

LOT 2.—The Mines known as BIRCUNE, and THE JAMES PIT, with the mineral rights and power to get iron ore over an area 100 A. 2 R. 38 P., statute measure, more or less, with the engine house and other erections; pumping and drawing engines, and other machinery and effects, the property of the company, within the limits of the royalty.

LOT 3.—The Mines known as LINDAL COTE MINE, and the PINDER RING MINE, with the mineral rights and power to get iron ore over an area of 257 A. 3 R. 12 P., statute measure, more or less; together with the company's offices, engine and other houses; pumping and drawing engine, and other machinery and effects, the property of the company, within the limits of the royalty.

This lot also includes a RESIDENCE for a manager, and Four COTTAGES, in close proximity to the workings. Also 9 A. 2 R. of meadow land.

The above Mines are situate in the Parish of Dalton-in-Furness, in the County of Lancaster, in the heart of the Furness Ore District. The Furness Railway runs through the Royalty, and the various pits communicate with the Main Line of Railway, by convenient Tramways and Sidings.

The Mines and Royalties are held by the Vendors, on Lease from his Grace the Duke of Buccleuch and Queensbury, for 21½ years from the 29th day of September, 1881, except a small part of Lot 1, which is held of the Right Honourable the Earl of Derby, for the like time, and on similar conditions to the Buccleuch Lease.

The Cross Gate Mines are in working order, and are supposed to be equal to an annual output of 50,000 tons of rich Blast Ore. The Royalties are surrounded by Working Mines, and, as to a great part of the area, are practically untried; and from their position in the centre of the Furness Ore District, affords an opportunity to investors never before offered in the Furness District.

The Working Plans of the Mines may be seen on application to S. HART JACKSON, Solicitor, 42, Market-street, Ulverston, who will offer every facility to parties wishing to inspect the Mines.

Plans of the Royalties, Conditions of Selling, and Schedules of the Working Plant and Tools may be had on application to the Auctioneer, at his Office, County Chambers, Ulverston, price 2s. 6d.

## TO LEAD SMELTERS, MANUFACTURERS, AND OTHERS.

TO BE SOLD, BY PRIVATE CONTRACT, the OLD-ESTABLISHED WORKS known as the SWINFORD LEAD WORKS, situate at Bitton, on the River Avon, about one mile from the Midland Railway Station.

The Works comprise Scotch Smelting Hearths, Cupola, Refining, Softening, and other necessary furnaces, Desilverising House with range of Pattinson's pots, extensive flues and condensers, steam power, two water wheels of 30 horse power each, foreman's house, offices, ore sheds, and other conveniences, the whole containing about 2 acres of land.

There is good and cheap water communication by means of the canal system between the works and Bristol, Bath, and the Midland Counties.

For particulars apply to the Proprietors, Messrs. WESTON, SON, and Co., 18, Peter-street, Bristol; or to Messrs. HENRY BRITTAN and Co., Solicitors, Bristol.

## CORNWALL.

FOR SALE BY TENDER, in one Lot, by order of the Liquidators of the Kit Hill Great Consols Company (Limited), the MINES known as the

### KIT HILL GREAT CONSOLS.

Stoke Climsland, Cornwall, 2 miles from Callington, with engine house, account house, and all outbuildings held under lease dated 15th February, 1831, by H.R.H. the Prince of Wales, for 21 years from 7th January, 1831, minimum rent £30 per annum, dues one-twentieth.

The property is in a well-known mining district. The engine-shaft has been sunk 112 fms., and a tunnel 8 ft. by 8 ft. has been driven 350 fms. to intersect the various lodes running through the sett.

The machinery and plant of the best description, and well adapted for the development of the mines, comprise one 30 in. cylinder rotary engine with two Cornish boilers, 10 and 8 tons respectively; one horizontal engine, 16 in.; one 13½ in. air compressor; 200 fms. 2½ in. wrought-iron air-drawing machine; about 200 fms 2½ in. steel wire rope, with pulleys and stands; two eight-arm capstans, and about 200 fms. 10 in. rope; two shaft teakles, with shear-legs, &c.; three "Eclipse" rock-drills; three Cornish drills; two 16 in. cylinder Robey engines; two 13 in. air-compressing engines; about 4 0 fms. 3 in. wrought iron pipes. About 400 fathoms tramways, tram carriages, &c.

The Liquidators do not bind themselves to accept any tender. All tenders to be sent in by the 1st November, 1885, addressed to the Liquidators, care of Messrs. SNELL, SON, and GREENIP, Solicitors, 1 and 2, George-street, Mansion House, London, E.C., from whom full particulars can be obtained.

## ST. JUST, CORNWALL.

MINING SETTS, MACHINERY, AND PLANT FOR SALE.

MR. A. BERRYMAN will OFFER FOR SALE BY AUCTION, at the Central Hall, Penzance, on MONDAY, October 19th instant, at Three o'clock in the afternoon, as a going concern, and in One Lot, the MINING SETTS of

### EAST BOTALLACK MINE,

Situate in the parish of St. Just (in Penwith), Cornwall, together with all the MACHINERY, MATERIALS, and PLANT thereon.

The setts extend over a large area of mineral ground, and the terms are easy.

Further information may be obtained of Captain JOHN HOLLOW, on the Mine; or of the Auctioneer, Penzance.

Dated 5th October, 1885.

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FEES MODERATE. LIST SENT ON APPLICATION.

## SALE BY PUBLIC AUCTION OF THE MINING AND LANDED PROPERTY, &c. OF THE "CALLER-STOLLEN-GEWERKSCHAFT," IN RHENISH PRUSSIA.

BY decision of the meeting of the Shareholders, the undersigned MR. GRAFFWEG, Royal Notary, will SELL BY PUBLIC AUCTION, on WEDNESDAY, the 28th October, 1885, at 3·30 P.M., at his offices, No. 13, Steinfeldergasse, Cologne, without reserve, the MINING CONCERN of the above-named company, consisting of a MINING CONCESSION of lead, copper, and iron, measuring 2,959,287 7M., situate near Call, on the Call-Trier Railway; also Landed Property of 55HA. 52A. 79M., comprising superior dwelling-house at Call, two officials dwelling-houses on the works, machinery, plant, and warehouses, comprising one 24-horse power winding engine, one 24-horse power water engine, one 26-horse power dressing machine, two Bouilleur boilers, each of 25-horse power, one Field's boiler of 40-horse power, rails above and underground of about 2000 metres in length, dressing with drums, set, and round buddle, &c. The mine was until about two months ago in full working order, and produced sulphuret of lead and white lead ore, containing an average of 61 per cent. lead, and 14·18 gr. silver in 100 kg. ore.

The conditions of the sale, documents, as well as a description of the mine, may be seen at the office of the undersigned Notary; also at the Mining Manager, Mr. GERLACH, at Call, the latter of whom would send the description and full particulars on application.

Cologne, September, 1885. (Signed) THE ROYAL NOTARY: GRAFFWEG.

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PARIS, 1878.

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32,200 SHARES.

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DIVIDEND distributed for each share, 12 francs.

(Signed) A. LICCIONI, President.
(Signed) VICTOR J. GRILLET, Treasurer.

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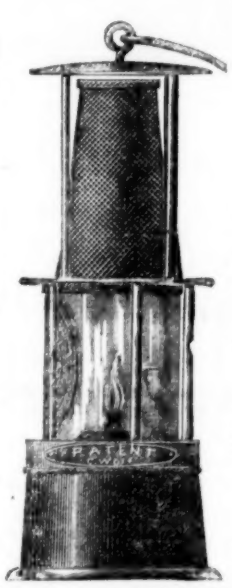

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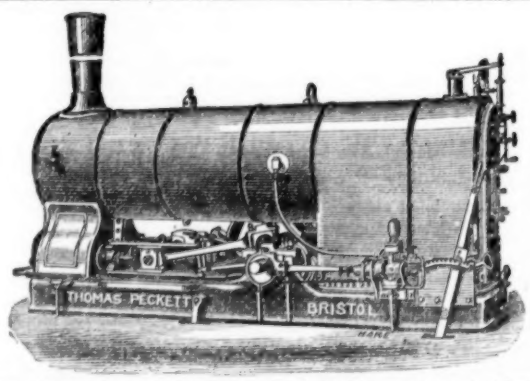


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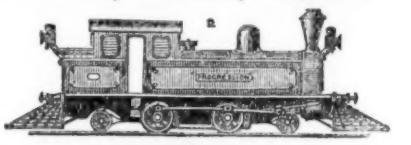

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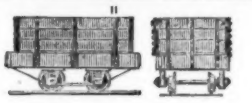

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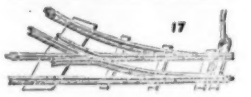

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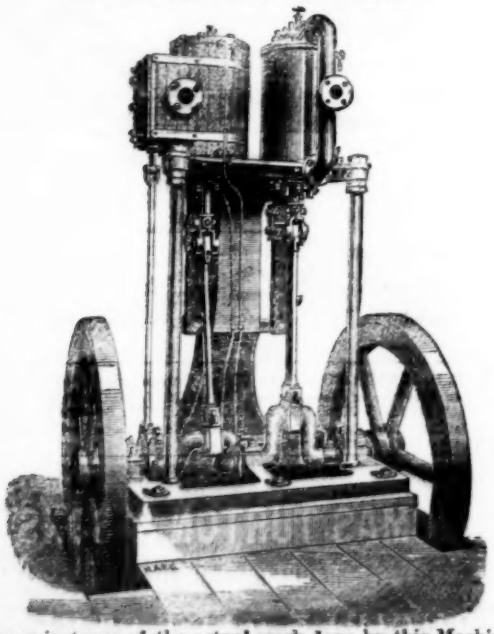

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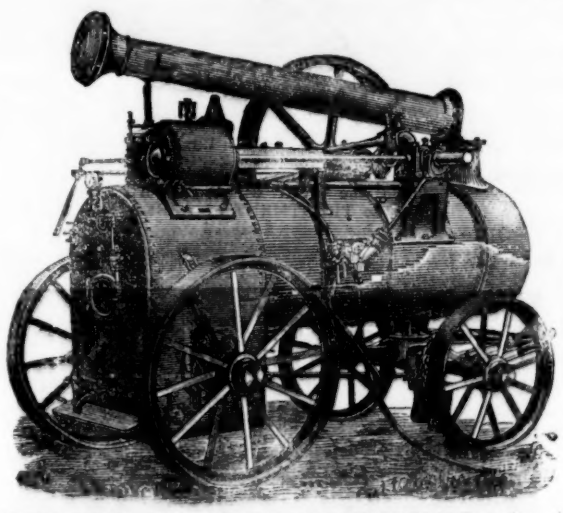

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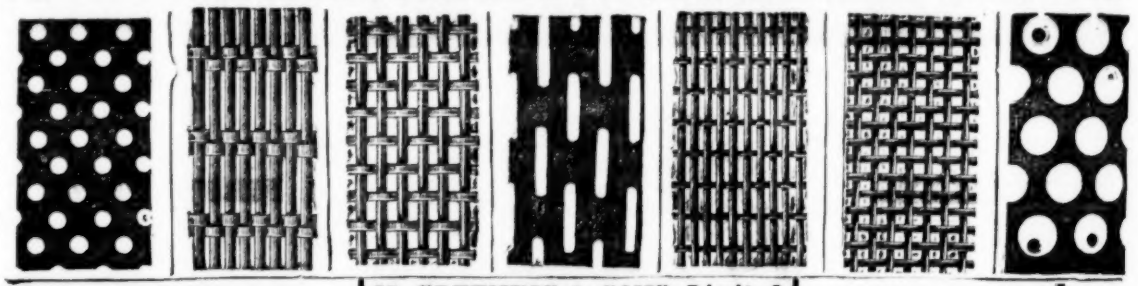

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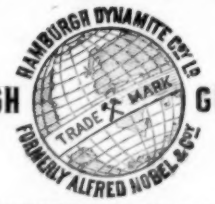
HAMBURGH 

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"It is with the greatest satisfaction that we write these few lines in order to acquaint you that the 12×3 Pulverizer you provided us with, has quite fully given the results you represented to us, completely reducing our material to an impalpable powder at one operation. Should you refer any one to us we should have much pleasure in recommending the machine."

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverizes them with equal success. You can put in a small paving stone and bring it out like flour."

"In reply to your favour, I have much pleasure in informing you that the 12×3 Pulverizer we had from you is giving us every satisfaction. The material we are operating on is an exceptionally hard one. I am well satisfied with its working."

"Our experience is that the motion and mechanical arrangements of your machine are the best for pulverizing that we have ever met with."

"The reports from our mines as regards the working of your Fine Crusher (20×5) recently supplied are very favourable, although we cannot quote you exact figures. On being got into position it was tried *by hand*, with the result that it made short work of the biggest pieces of ore we put into the hopper. You might say how long you would take to deliver another of the same size."

"As I once before stated, your machine is a perfect pulverizer."

"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam, and our engine, which is a 12 h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

All Shafts and Axles are made of the Best Hammered Steel.

CATALOGUES FREE.

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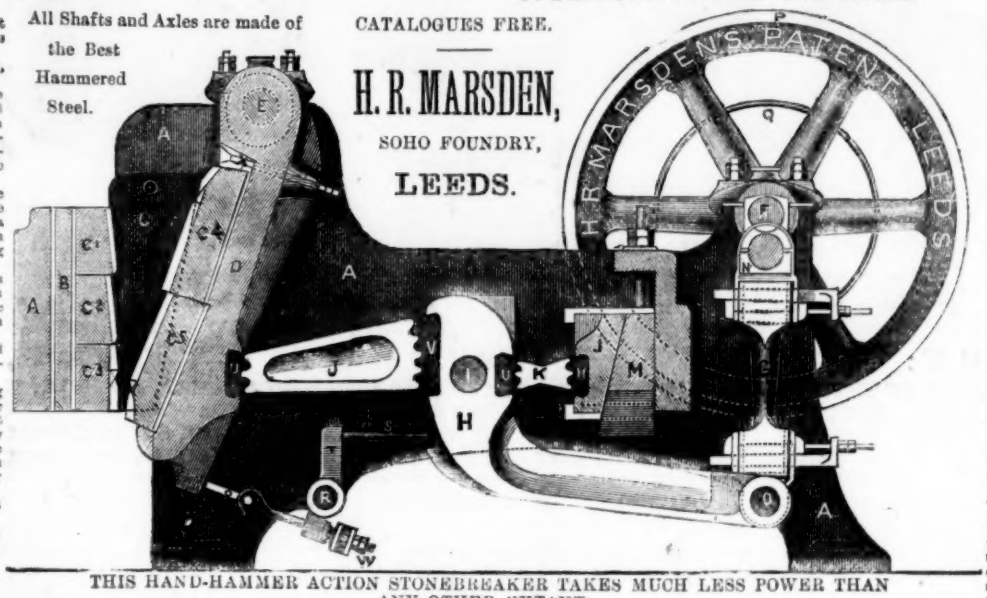
SOHO FOUNDRY,
LEEDS.




THIS HAND-HAMMER ACTION STONEBREAKER TAKES MUCH LESS POWER THAN ANY OTHER EXTANT.

STONEBREAKERS AND ORE CRUSHERS TESTIMONIALS.

"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in Lever Hand Hammer-Motion Stone Breaker you supplied us with. We find that our 4 h.p. Engine with ease drives it 250 revolutions per minute, and breaks six tons per hour of the hardest "Diorite" Whinstone: the sample is much before any hand-broken we have ever got done. Our Mr. P. J. Graham, C.E., who was Surveyor of Highways for ten years, before joining our firm, says: It is by far the most economical machine he ever had to do with; he had two of your former make, and two of another firm's make; compared with these four machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken macadam is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. It is by far the best sample we have ever seen."

"I now order three of your Stone Crushers, size 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 24×13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and I could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased eleven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

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## STEAM PUMPS

FOR

## COLLIERY PURPOSES.

Specially adapted for forcing Water any height

ALSO, FOR

## SINKING, FEEDING BOILERS AND STEAM FIRE ENGINES,

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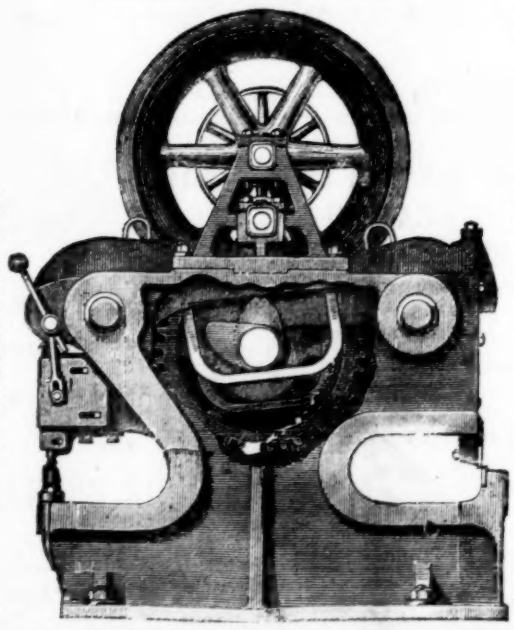

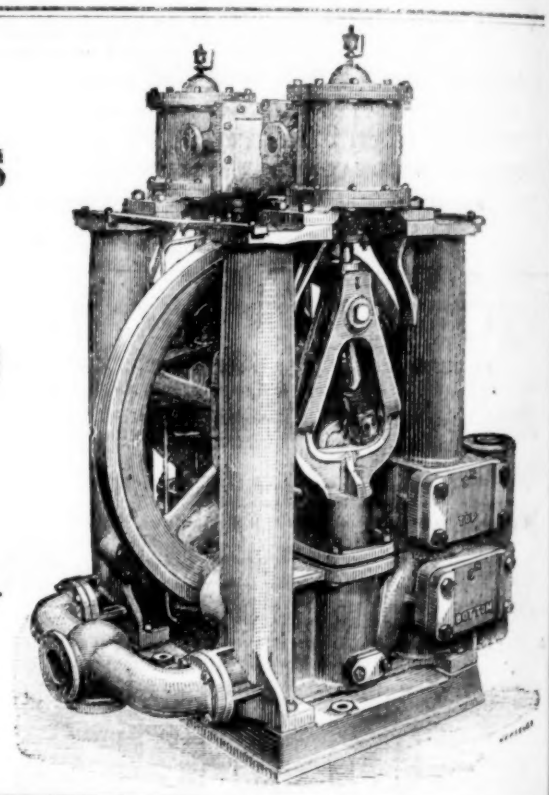

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This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

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These Turbines are at work in nearly every country in England. Apply to—

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